GOVERNING THE USE OF OCEAN SPACE

HEARING

BEFORE THE

COMMITTEE ON FOREIGN RELATIONS
UNITED STATES SENATE

NINETIETH CONGRESS

FIRST SESSION

ON

S.J. Res. 111

A RESOLUTION EXPRESSING OPPOSITION TO VESTING TITLE TO THE OCEAN FLOOR IN THE UNITED NATIONS AT THIS TIME

S. Res. 172

A RESOLUTION TO EXPRESS THE SENSE OF THE SENATE CONCERNING THE NEED FOR THE ESTABLISHMENT OF REASONABLE RULES OF CONDUCT GOVERNING ACTIVITIES BY EACH NATION UNDER THE EXTRA TERRITORIAL WATERS

S. Res. 186

A RESOLUTION TO EXPRESS THE SENSE OF THE SENATE THAT THE PRESIDENT SHOULD MAKE ALL NECESSARY EFFORTS TO PLACE BEFORE THE GENERAL ASSEMBLY OF THE UNITED NATIONS A RESOLUTION ENDORSING BASIC PRINCIPLES FOR GOVERNING THE ACTIVITIES OF NATIONS IN OCEAN SPACE

NOVEMBER 29, 1967

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GOVERNING THE USE OF OCEAN SPACE

WEDNESDAY, NOVEMBER 29, 1967

UNITED STATES SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, D.C.

The committee met, pursuant to call, at 10 a.m., in room 4221, New Senate Office Building, Senator John Sparkman presiding.

Present: Senators Sparkman, Gore, Pell, Clark, and Aiken.

Senator SPARKMAN. Let the committee come to order, please.

This morning the Committee on Foreign Relations is considering three resolutions pertaining to the use of the resources of the ocean floor—Senate Joint Resolution 111, by Senator Cotton, and Senate Resolutions 172 and 186, both by Senator Pell.

(The resolutions referred to follow:)

[S.J. Res. 111, 90th Cong., first sess.]

JOINT RESOLUTION Expressing opposition to vesting title to the ocean floor in the United Nations at this time

Whereas strong efforts are being exerted by certain groups and individuals to immediately place the United Nations in control of the resources of the bed of the deep ocean beyond the Continental Shelf; and

Whereas our national goals for the development of the ocean floors resources have not been clearly defined, nor has an approach to the development of these resources been formulated; and

Whereas at present we have only limited understanding of the extent of the undersea resources, the means of obtaining access to them, the conditions for processing and marketing them, and the impact which activities connected with their extraction and mining will have on other uses of the sea; and

Whereas the Congress of the United States in 1966 enacted Public Law 89–454 for the expressed purpose of establishing two official bodies—the National Council on Marine Resources and Engineering Development, and the Commission on Marine Science, Engineering and Resources—to identify national objectives concerning undersea resources and recommend Federal programs to accomplish these aims: Therefore be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That it is the sense of the Congress that any action at this time to vest control of deep ocean resources in an international body would be premature and ill-advised, and be it further

Resolved, That the Congress of the United States memorialize the President to instruct American representatives of the United Nations to oppose any action at this time to vest control of the resources of the deep sea beyond the Continental Shelves of the United States.

[S. Res. 172, 90th Cong., first sess.]

RESOLUTION

Whereas through developing technology man becomes increasingly capable of exploring, and exploiting the resources of, the deep sea; and

Whereas this technology carries with it the threat of legal confrontations between nations of the world over the ownership and jurisdiction of the bed of the deep sea and the superadjacent waters, and the resources therein; and

Whereas the extension of the rule of law and the development of practicable arms control measures with respect to these territories are essential if mankind is to enjoy the fruits of his efforts in the deep sea: Now, therefore, be it

Resolved, That it is the sense of the Senate that—

(1) the United States should remain committed to the principle that the living and mineral resources in suspension in the high seas, beyond twelve miles from the coast, are free for the use of all nations, subject to international treaty obligations and the conservation provisions of the 1958 Geneva conventions adopted by the United Nations-sponsored Conference on the Law of the Sea;

(2) the United States should urge the United Nations to consider the problems of conservation and use of marine resources of the seabed and subsoil beyond Continental Shelf limits and any licensing or other arrangements necessary for the regulation thereof;

(3) there is an urgent need for the establishment of an international agreement under which the floor of the deep sea and the resources of the seabed and subsoil thereof, beyond the limits of the Continental Shelf, will be considered free for the exploration and exploitation of all nations, and are incapable of coming under the sovereignty of any one nation or group of nations;

(4) any such international agreement should incorporate practicable arms control proposals looking toward mutually advantageous safeguard provisions, should encompass the results of an examination of the question of the implacement of nuclear or other weapons of mass destruction on the deep sea floor, and should contribute to a reduction of the world arms race by enjoining all nations from the stationing of unproven types of nuclear or other kinds of mass destruction weapons on the ocean floor where unique conditions are likely to cause greater risks of accidents;

(5) fixed limits must be set for defining the outer boundaries of the Continental Shelf of each nation, and that such limits can best be determined by an international conference to be convened by the United Nations in 1969, five years after the coming into force of the 1958 Geneva Convention on the Continental Shelf; and

(6) the President should institute a detailed study within the Department of State and other interested departments and agencies of the United States and in cooperation with the United Nations with respect to the problems of criminal jurisdiction over, and the policing of, activities on and beneath the surface of extraterritorial seas and on the deep sea floor; should consider those situations, both immediate and anticipated, which are not covered by existing international agreements, and should seek an early determination by the United Nations on the matter of developing and proposing regulations for handling those situations.

[S. Res. 186, 90th Cong. first sess.]

RESOLUTION

Whereas the development of modern techniques for the exploration of the deep sea and the exploitation of its resources carries with it the threat of legal confrontations between nations of the world over the ownership and jurisdiction of the bed of the deep sea and the superjacent waters, and the resources therein; and

Whereas the threat of anarchy now exists in the field of scientific exploration and commercial exploitation of the deep sea and its resources: Now, therefore, be it

Resolved, That it is the sense of the Senate that the President should make such efforts, through the United States delegation to the United Nations, as may be necessary to place before the General Assembly for its consideration at the earliest possible time the following resolution endorsing basic principles for governing the activities of nations in ocean space:

"DECLARATION OF LEGAL PRINCIPLES GOVERNING ACTIVITIES OF STATES IN THE EXPLORATION AND EXPLOITATION OF OCEAN SPACE

"PREAMBLE

"The General Assembly,

"Inspired by the great prospects opening up before mankind as a result of man's ever-deepening probe of ocean space—the waters of the high seas, including the superjacent waters above the continental shelf and outside the territorial sea of each nation, and the seabed and subsoil of the submarine areas of the high seas outside the area of the territorial sea and continental shelf of each nation,

"Recognizing the common interest of all mankind in the progress of the exploration of ocean space and the exploitation of the resources in ocean space for peaceful purposes,

"Believing that the threat of anarchy exists in the exploration and exploitation of ocean space and its resources,

"Desiring to contribute to broad international cooperation in the scientific as well as the legal aspects of the exploration and exploitation of ocean space and its resources for peaceful purposes,

"Recalling the four conventions of the law of the sea and an optional protocol of signature concerning the compulsory settlement of disputes, which agreements were formulated at the United Nations Conference on the Law of the Sea, held at Geneva, Switzerland, from 24 February to 27 April 1958, and were adopted by the Conference at Geneva on 29 April 1958,

"Recalling the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, which was unanimously endorsed by General Assembly resolution 2222 (XXI) of 19 December 1966 and signed by sixty nations at Washington, London, and Moscow on 27 January 1967, and considering that progress towards international cooperation in the exploration and exploitation of ocean space and its resources and the development of the rule of law in this area of human endeavor is of comparable importance to that achieved in the field of outer space,

"Convinced that international agreement on principles governing the activities of States in the exploration and exploitation of ocean space and its resources would further the welfare and prosperity of mankind and benefit their national States,

"Believing that the living and mineral resources in suspension in the high seas, and in the seabed and subsoil of ocean space, are free for the use of all nations, subject to international treaty obligations and the conservation provisions of the conventions on the Law of the Sea adopted at the United Nations Conference on the Law of the Sea at Geneva on 29 April 1958,

"Solemnly declares that in the exploration of ocean space and the exploitation of its resources States should be guided by the following principles:

"I—General Principles Applicable to Ocean Space

"1. Ocean space and the resources in ocean space shall be free for exploration and exploitation by all nations without discrimination of any kind, on a basis of equality of opportunity, and in accordance with international law, and there shall be free access to all areas of ocean space.

"2. Ocean space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.

"3 There shall be freedom of scientific investigation in ocean space and States shall facilitate and encourage international cooperation in such investigation.

"4. The activities of States in the exploration and exploitation of ocean space and its resources shall be carried on in accordance with international law, including the Charter of the United Nations, and the principles set forth in this Declaration, in the interest of maintaining international peace and security and promoting international cooperation and understanding.

"5. States bear international responsibility for national activities in ocean space, whether carried on by governmental agencies or non-governmental entities or nationals of such States, and for assuring that national activities are carried on in conformity with the principles set forth in this Declaration. The activities of non-governmenal entities and nationals of States in ocean space shall require authorization and continuing supervision by the State concerned. When activities are carried on in ocean space by an international organization, responsibility for

compliance with the principles set forth in this Declaration shall be borne by the international organization itself.

"6. In the exploration of ocean space and the exploitation of its resources, States shall be guided by the principle of cooperation and mutual assistance and shall conduct all their activities in ocean space with due regard for the corresponding interests of other States.

"7. States shall render all possible assistance to any person, sea vehicle, or facility found in ocean space in danger of being lost or otherwise in distress.

"8. States engaged in activities of exploration or exploitation in ocean space shall immediately inform other interested States and the Secretary-General of the United Nations of any phenomena they discover in ocean space which could constitute a danger to the life or health of persons exploring or working in ocean space.

"II—USE OF HIGH SEAS

"1. All States have the right for their nationals to engage in fishing, aquaculture, and in-solution mining in the high seas beyond twelve miles from the coast or other appropriate baseline from which the breadth of the territorial sea of any States is measured under rules of international law, particularly as provided in the agreement entitled 'Convention on the Territorial Sea and the Contiguous Zone', adopted by the United Nations Conference on the Law of the Sea at Geneva on 29 April 1958.

"2. This right shall be subject to the treaty obligations of each State and to the interests and rights of coastal States and shall be conditioned upon fulfillment of the conservation measures required in the agreement entitled 'Convention on Fishing and Conservation of the Living Resources of the High Seas', adopted by the United Nations Conference on the Law of the Sea at Geneva on 29 April 1958.

"3. Any disputes which may arise between States with respect to fishing, aquaculture, in-solution mining, and conservation activities of States in the high seas shall be settled in accordance with all the provisions of such convention prescribing a compulsory method for the settlement of such questions.

"III—USE OF SEA BED AND SUBSOIL OF OCEAN SPACE

"1. In order to promote and maintain international cooperation in the peaceful and orderly exploration, and exploitation of the natural resources, of the seabed and subsoil of submarine areas of ocean space, States shall engage in such exploration or exploitation only under licenses issued by a licensing authority to be designated by the United Nations, with approval by the Security Council in the manner provided by paragraph 3 of Article 27 of the Charter of the United Nations.

"2. The natural resources referred to in this Article consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.

"3. The activities of nationals and non-governmental entities of States in the exploration of submarine areas of ocean space and the exploitation of the natural resources of such areas shall require authorization and continuing supervision by the State concerned, and shall be conducted under licenses issued to States making application on behalf of their nationals and non-governmental entities. If such activities are to be carried on by an international organization, a license may be issued to such organization.

"4. In issuing licenses and prescribing regulations, the licensing authority shall apply all relevant principles set forth in this Declaration and shall apply the following criteria:

"(a) The license issued by the licensing authority shall (i) cover an area of such size and dimensions as the licensing authority may determine, (ii) be for a period of not more than ten years, with the option of renewal, (iii) require the payment to the licensing authority of such fee or royalty as may be specified in the lease, (iv) require that such lease will terminate within a period of not more than five years in the absence of operations thereunder, and (v) contain such other reasonable requirements as the licensing authority may deem necessary to implement the principles set forth in this Declaration and to provide for the conservation of and prevention of the waste of the natural resources of the seabed and subsoil of ocean space.

"(b) If two or more States apply for licenses to engage in the exploration of the seabed and subsoil of ocean space or the exploitation of its natural resources in the same area or areas of ocean space, the licensing authority shall, to the greatest extent feasible and practicable, encourage cooperative or joint working relations between such States and be guided by the principle that ocean space shall be free for use by all States, without discrimination of any kind, on a basis of equality of opportunity. But, if it proves impractical for the license to be shared, the licensing authority shall determine which State shall receive the license.

"(c) A coastal State has a special interest in the conservation of the natural resources of the seabed and subsoil of ocean space adjacent to its territorial sea and continental shelf and this interest shall be taken into account by the licensing authority.

"(d) A coastal State is entitled to take part on an equal footing in any system of research and regulation for purposes of conservation of the natural resources of the seabed and subsoil of ocean space in that area, even though its agencies or nationals do not engage in exploration there or exploitation of its natural resources.

"(e) The exploration of the seabed and subsoil of ocean space and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing, or the conservation of the living resources of the sea, nor result in any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication.

"(f) A State or international organization holding a license is obliged to undertake, in the area covered by such license, all appropriate measures for the protection of the living resources of the sea from harmful agents and shall pursue its activities so as to avoid the harmful contamination of the environment of such area.

"5. Subject to the following provisions and any regulations prescribed by the licensing authority, a State or international organization holding a license is entitled to construct and maintain or operate on the seabed and subsoil of ocean space installations and other devices necessary for its exploration and the exploitation of its natural resources, and to establish safety zones around such installations and devices and to take in those zones measures necessary for their protection:

"(a) The safety zones referred to in this paragraph may extend to a distance of 500 metres radius around the installations and other devices which have been erected, measured from each point of their outer edge. Ships of all nationalities must respect these safety zones.

"(b) Such installations and devices do not possess the status of islands and have no territorial sea of their own.

"(c) Due notice must be given of the construction of any such installations, and permanent means for giving warning of their presence must be maintained. Any installations which are abandoned or disused must be entirely removed.

"(d) Neither the installations or devices, nor the safety zones around them, may be established where interference may be caused to the use of recognized sea lanes essential to international commerce and navigation.

"6. To the greatest extent feasible and practicable, the licensing authority shall disseminate immediately and effectively information and data received by it from license owners regarding their activities in ocean space.

"7. If a license owner has reason to believe that an activity or experiment planned by it or its nationals or non-governmental entities in the area covered by its license would cause potentially harmful interference with activities of other States in the peaceful exploration and exploitation of such area of ocean space, it shall undertake appropriate international consultations and obtain the consent of the licensing authority before proceeding with any such activity or experiment. Any interested State which has reason to believe that an activity or experiment planned by a license owner would cause potentially harmful interference with activities in the peaceful exploration and exploitation of submarine areas of ocean space may request consultation concerning the activity or experiment and submit a request for consideration of its complaint to the licensing authority, which may order that the activity or experiment shall be suspended, modified, or prohibited.

"8. All stations, installations, equipment, sea vehicles, machines, and capsules used by a license owner on the sea-bed or in the subsoil of ocean space, whether manned or unmanned, shall be open to representatives of the licensing authority

and to the Sea Guard of the United Nations referred to in Article VII of this Declaration.

"9. Whenever a license owner fails to comply with any of the provisions of the license, such license may be canceled by the licensing authority, upon thirty days notice to the license owner, but subject to the right of resort to the International Court of Justice by such license owner.

"10. Any dispute which may arise under this Article between States shall first be submitted for settlement by the licensing authority, which shall determine its own procedure, assuring each party a full opportunity to be heard and to present its case.

"11. In all cases of disputes under this Article, whether between States or between a State or States and the licensing authority, the licensing authority shall be empowered to make awards.

"12. If the licensing authority shall not have rendered its decision within a reasonable period of time or if any party to a dispute under this Article desires review of the decision of the licensing authority, such dispute shall be within the compulsory jurisdiction of the International Court of Justice as contemplated by paragraph 1 of Article 36 of the Statute of the International Court of Justice, and may accordingly be brought before the Court by an application made by any party to the dispute, including the licensing authority in cases of noncompliance with its decisions.

"IV—Use of Seabed and Subsoil of Ocean Space for Peaceful Purposes Only

"1. The seabed and subsoil of submarine areas of ocean space shall be used for peaceful purposes only.

"2. All States shall refrain from the implacement or installation on or in the seabed or subsoil of ocean space of any objects containing nuclear weapons or any kinds of weapons of mass destruction, or the stationing of such weapons on or in the seabed or subsoil of ocean space in any other manner.

"3. All States shall refrain from causing, encouraging, or in any way participating in the conduct of the activities described in paragraph 2 of this Article.

"4. The prohibitions of this Article shall not prevent the use of miitary personnel or equipment for scientific research or for any other peaceful purpose.

"5. All stations, installations, equipment, sea vehicles, machines, and capsules, whether manned or unmanned, on the seabed or in the subsoil of ocean space shall be open to representatives of other States on a basis of reciprocity. Such representatives shall give reasonable advance notice of a projected visit in order that appropriate consultations may be held and that maximum precautions may be taken to assure safety and to avoid interference with normal operations in the facility to be visited. All such facilities shall be open at any time to the Sea Guard of the United Nations referred to in Article VII of this Declaration.

"V—Prohibition Against Disposal of Radioactive Waste Material in Ocean Space

"1. The disposal in ocean space of radioactive waste material shall be prohibited.

"2. In the event of the conclusion of any other international agreements concerning the use of nuclear energy, including the disposal of radioactive waste material, to which all of the original parties to the international agreement implementing these principles are parties, the rules established under such agreements shall apply in ocean space.

"VI—Limits of Continental Shelf

"In order to assure freedom of the exploration and exploitation of ocean space and its resources as provided in these principles, there is a clear necessity that fixed limits must be set for defining the outer boundaries of the continental shelf of coastal States. For the purpose of these principles, the term 'continental shelf' is used as referring (a) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea to a depth of 600 metres, and (b) to the seabed and subsoil of similar submarine areas adjacent to the coast of islands.

"VII—Sea Guard

"1. In order to promote the objectives and ensure the observance of the principles set forth in this Declaration, there shall be established as a permanent force a Sea Guard of the United Nations which may take such action as may be necessary to maintain and enforce international compliance with these principles.

"2. The Sea Guard shall be under the control and overall supervision of the Security Council. The general location, degree of readiness, facilities, and employment of the Sea Guard shall be determined by the Security Council with the assistance of the licensing authority referred to in Article III of this Declaration.

"3. All Members of the United Nations shall provide to the Security Council, on its call and in accordance with a special agreement or agreements as referred to in Article 43 of the Charter of the United Nations, forces, assistance, and facilities necessary for the purpose of the establishment and maintenance of the Sea Guard.

"VIII—National Laws To Apply to Crimes in Ocean Space Pending International Agreement on Code of Criminal Law

"1. Unless otherwise provided by international agreement or in this Declaration, personnel of States and non-governmental entities of States and of international organizations engaged in activities in the exploration or use of ocean space shall be subject to the criminal jurisdiction of the United Nations in accordance with a code of law governing criminal activities in ocean space to be promulgated by an appropriate committee or other organ of the United Nations and ratified by each State in accordance with its constitutional processes.

"2. Jurisdiction over any crimes committed in violation of the code of law promulgated under paragraph 1 of this Article shall be vested in an appropriate tribunal to be instituted by the United Nations with approval by the Security Council in the manner provided by paragraph 3 of Article 27 of the Charter of the United Nations.

"3. Pending the adoption of a code of law and the institution of a tribunal pursuant to the provisions of paragraphs 1 and 2 of this Article, personnel of States and non-governmental entities of States and international organizations engaged in activities of exploration or exploitation in ocean space shall be subject only to the jurisdiction of the State of which they are nationals or the State which bears responsibility for their activities in respect of all acts or omissions occuring while they are in ocean space, unless otherwise provided for by international law or in this Declaration;

"Recommends that a Committee of the United Nations relating to the law of ocean space be established to prepare a draft international agreement to implement the principles set forth in this Declaration;

"Requests the Committee relating to the law of ocean space to report to the twenty-third session of the General Assembly on the progress of its work."

Senator Sparkman. Interest in this subject has recently increased as the result of consideration by the General Assembly of the question of reserving the seabed and ocean floor and its subsoil exclusively for peaceful purposes, and using these resources in the interests of mankind.

AMBASSADOR GOLDBERG'S GENERAL ASSEMBLY ADDRESS

Ambassador Goldberg addressed a General Assembly committee on this question three weeks ago, and proposed that the General Assembly establish a Committee on the Oceans, patterned on the Outer Space Committee, to serve as a focal point within the General Assembly for study and development of the next step in this field.

I ask that the full text of Ambassador Goldberg's statement be printed in the record at this point, together with the State Department letters commenting specifically on Senate Joint Resolution 111 and Senate Resolution 172.

(The documents referred to follow:)

STATEMENT BY AMBASSADOR ARTHUR J. GOLDBERG, U.S. REPRESENTATIVE TO THE UNITED NATIONS IN COMMITTEE I, ON THE QUESTION OF THE RESERVATION EXCLUSIVELY FOR PEACEFUL PURPOSES OF THE SEA-BED AND THE OCEAN FLOOR, NOV. 8, 1967

Mr. Chairman, this is my first opportunity to speak before the First Committee at this Session. And I wish to use it to express the pleasure and satisfaction of the United States Delegation at your unanimous election as our presiding officer.

From time to time in the past, you served as Chairman in an acting capacity. On those occasions, the entire Committee was impressed by the objectivity, decisiveness and integrity you brought to your work. We are grateful, but hardly surprised, that you have continued to display these same characteristics since your election this year—and confident you will continue to guide the Committee's work in the same spirit throughout this Session.

With its consideration of the Maltese item concerning the Seabeds and Ocean Floor, the General Assembly has responded to the increasing awareness that one of man's oldest environments, the ocean, is also his newest and perhaps most valuable frontier. I would like to express my Delegation's gratitude to Ambassador Pardo for bringing this important question to the attention of the General Assembly.

My Delegation believes that mankind's expanding activities in the ocean depths call for new efforts for international cooperation, both in promoting the exploration and use of the deep ocean and its floor, and in the development of the general principles which might usefully guide man's activities in this new realm.

The premise on which the United States bases its position concerning a future legal regime for the deep ocean floor is straightforward. It was stated by President Johnson on July 13, 1966: "Under no circumstances, we believe, must we ever allow the prospects of rich harvest and mineral wealth to create a new form of colonial competition among the maritime nations. We must be careful to avoid a race to grab and to hold the lands under the high seas. We must ensure that the deep seas and the ocean bottoms are, and remain, the legacy of all human beings."

This means, in our view, that the deep ocean floor should not be a stage for competing claims of national sovereignty. Whatever legal regime for the use of the deep ocean floor may eventually be agreed upon, it should ensure that the deep ocean floor will be open to exploration and use by all states, without discrimination.

United Nations interest in the problems of the seas is not new; we are not writing on a clean slate in considering how the General Assembly can best deal with the question which has been brought before us. In the fifties, after extended work by the United Nations International Law Commission, a number of important Law of the Sea Conventions were adopted at a conference held in Geneva in 1958. One of these, the Convention on the Continental Shelf, is of particular interest to us in considering legal arrangements which might apply to the deep ocean floor. Under these conventions, the General Assembly was assigned the responsibility of deciding what steps should be taken with respect to requests for revision of the conventions.

A number of bodies in the United Nations have also given careful attention to other marine problems. Through the Inter-governmental Oceanographic Commission, UNESCO has actively encouraged scientific activities in the field of oceanography: the Food and Agriculture Organization has been concerned with the development and conservation of fisheries; the World Meteorological Organization is studying the influence of the oceans on weather; and the Intergovernmental Maritime Consultative Organization has done invaluable work in safety at sea.

The General Assembly last December endorsed a study of the present state of knowledge of marine resources requested by the Economic and Social Council, and asked the Secretary General to undertake, in addition, a survey of activities in marine science and technology. The Secretary General was also directed, as part of this study, to formulate proposals for expanding international cooperation and for improved marine education and training. In recognition of the complexity of the subject, the Secretary General was given until 1968 to report the results of his study and his recommendations.

Through its past activities, the United Nations has already built a solid record of accomplishment in dealing with questions concerning the oceans. It has been responsive to the needs of nations and has dealt effectively with problems as they arose.

The immediate question before the Assembly today is this: How can the General Assembly, in the light of the continuing advance of marine technology, best act to encourage the exploration and use of the ocean and its floor for the benefit of all mankind?

This is a very complex matter, and any decisions we make must recognize the full complexity of the problems involved. A hasty approach would be imprudent. But all deliberate speed and not indefinite delay is what is called for.

What this Assembly needs is in an instrument which would enable it to deal with both the scientific and the legal questions involved. Recalling the work and accomplishments of the Outer Space Committee, my Delegation proposes that the General Assembly take action this session to establish a Committee on the Oceans. This Committee would—

Act as a servant of the General Assembly in considering all proposals placed before the Assembly on marine questions, and make recommendations on such proposals to the Assembly for action;

Assist the General Assembly in promoting long-term international cooperation in marine science; and,

Assist the General Assembly in considering questions of law, including such matters as rights of use and exploration, arms control, and problems of pollution.

Such a committee would work with existing United Nations agencies and the ENDC, as appropriate, drawing upon their experience and their resources. The General Assembly should ask the Committee, as part of its initial work program, to make recommendations for action by the 23rd and subsequent General Assemblies to stimulate and support international cooperation and exchange in the exploration of the ocean floor.

Any extensive program for international cooperation in the exploration of the ocean floor would necessarily be a long-term effort and would require the careful harmonization of national programs and of the efforts of the specialized agencies. Under the Marine Resources Act of 1966, the United States has already begun to establish a coordinated long-range program in marine science, and we stand ready to do our share in developing a comprehensive program of international cooperation.

As part of its first report, the Committee might provide the Assembly with its views on the recommendations developed by the Secretary General in his study requested by last year's General Assembly, of activities in marine science and technology.

Finally, Mr. Chairman, my Delegation believes that the General Assembly, through the new Committee on Oceans, should begin immediately to develop general standards and principles to guide states and their nationals in the exploration and use of the deep ocean floor. All of our knowledge about the deep ocean floor and all of our technological skill in exploiting its resources could prove of little value, if man's law-making faculty does not keep pace.

Acting as the servant of the Assembly, the new Committee could study how states might best conduct their activities on the deep ocean floor so as to maintain international peace and security and promote international cooperation, scientific knowledge, and economic development. It could also consider what principles might be agreed upon to help conserve the living resources of the seas, to prevent pollution, and to avoid disturbance of the biological, chemical and physical balances of the seas.

I do not wish to imply that the task of developing legal principles for the deep ocean floor will be simple. The question of definition of the deep ocean floor will have to be considered. The work will have to take into account existing treaties, including the Convention on the Continental Shelf. These treaties confer rights which are valued and retained by the signatories.

Questions of arms control must also be an essential part of our consideration of the oceans. Complex as these questions are, they must be taken into consideration if we are to develop meaningful principles to govern future state behavior. The United States Delegation believes that we must seek effective arms control measures as part of the evolving law of the deep ocean floor and that their development should also come under the mandate of the Oceans Committee.

While my Delegation believes that it is too early to take any final decisions on proposals for a comprehensive legal regime for the deep ocean floor, such as suggested by Ambassador Pardo, we would participate energetically in the studies which will be needed before such decisions can be made.

Mr. Chairman, the program I have suggested would represent an ambitious undertaking for the Assembly. The problems ahead are vast. Yet the opportunities are equally vast.

A Committee on Oceans, building on the present efforts of member states and the United Nations, could serve as the focal point within the General Assembly for study and development of the next steps which the nations must take together in this field. In creating this Committee, and directing it toward the tasks ahead, we would take effective action to enhance our knowledge of the ocean and its floor—and to use it for the long-term benefit of the human family.

DEPARTMENT OF STATE,
Washington, D.C., November 1, 1967.

Hon. J. W. FULBRIGHT,
Chairman, Committee on Foreign Relations,
U.S. Senate.

DEAR MR. CHAIRMAN: The Secretary has asked me to reply to your letter of September 21, 1967, requesting comments on S.J. Res. 111.

The resolution would express the sense of Congress that it would be premature and ill-advised at this time to vest control of deep ocean resources in an international body. It would further ask the President to instruct our representatives at the United Nations to oppose any action at this time to vest control of the resources of the deep sea beyond our continental shelves.

Let me say at once that the United States Government has no intention of supporting an effort at this General Assembly to vest jurisdiction of the deep ocean floor in an international body and does not expect the Assembly to take such action.

Accordingly, we do not believe that the current situation is such as to require the expression of Congressional opinion advocated in the resolution.

It may be helpful in this regard to review briefly the proposals which have caused the sponsors of the resolution some concern and to indicate the character of the Administration's thinking on the issues involved.

Recent technological advances have aroused speculation concerning the potential wealth available to mankind on and under the deep ocean floor. This has resulted in rapidly increasing interest in the problem of making suitable international arrangements with respect to the exploitation of deep sea bed resources.

In August the Representative of Malta at the United Nations, Ambassador Arvid Pardo, proposed the inclusion in the agenda of the current United Nations General Assembly Session of an item calling for the consideration of a treaty reserving use of the ocean floor, beyond the limit of national jurisdiction, for peaceful purposes; providing for use of the financial benefits derived from its exploitation primarily for the benefit of less developed countries; and envisaging the creation of an international agency with jurisdiction over the deep ocean floor to accomplish these purposes.

All these proposals reflect a felt need for additional legal guidance for public and private organizations which contemplate activities on the deep ocean floor. Very careful study will be required before the United States determines its position in this area.

The United States is therefore not now prepared to support the proposal of Malta in the General Assembly as it was introduced. We believe that other major maritime powers will react with similar caution. The General Assembly can be expected to undertake a deliberate study of this problem before taking specific action, such as the preparation of a treaty. In this connection, it should be noted that the development of legal principles for outer space activity required years of negotiation before culminating in the conclusion of the Outer Space Treaty of 1967. Discussion in the General Assembly this year could well initiate a similar process.

For these reasons we believe that S.J. Res. 111 overstates the immediacy of the problem and addresses itself to a danger which is not present. We do not believe its passage would be necessary or helpful and we consequently recommend that no action be taken on it.

The Bureau of the Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report.

Sincerely yours,

WILLIAM B. MACOMBER, JR.,
Assistant Secretary for Congressional Relations.

DEPARTMENT OF STATE,
Washington, Nov. 27, 1967.

HON. J. W. FULBRIGHT,
Chairman, Committee on Foreign Relations,
U.S. Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: The Secretary has asked me to reply to your letter of October 3, 1967, in which you request the Department's comments on S. Res. 172, submitted on September 29, 1967, by Senator Pell. I appreciate this opportunity to be of assistance to your committee.

Under the resolution presented by Senator Pell, the Senate is asked to express its views on a number of current questions relating to the ocean, the ocean floor and their resources. These questions involve the ownership of the living and mineral resources of the ocean and ocean floor, conservation, arms control, the more precise definition of the continental shelf, and criminal jurisdiction beneath the high seas and on the deep sea floor.

Senator Pell's views are most useful and timely. He has identified many of the pertinent issues relating to the ocean floor which will have to be considered by the international community. The Department is already engaged in a careful study of these very issues. The General Assembly of the United Nations appears to be on the threshold of a long-term consideration of the ocean floor, its resources and the principles to be applied to activities there. The sense of urgency conveyed in Senator Pell's resolution is fully justified.

The relationship of arms control to future activities on the ocean floor is particularly complex, and our present careful study of this relationship must be completed before we will be in a position to make proposals in the United Nations or elsewhere.

We are now only at the beginning of the process of international consideration of questions involving the deep oceans. We appreciate, and are taking fully into account, Senator Pell's suggestions. However, the Department cannot commit itself to making the particular proposals suggested or to the time schedule implicit in the Senator's resolution. Accordingly, we recommend that action by the Senate on S. Res. 172 and other resolutions on the subject await a fuller development of the major issues facing the United States in this area as a consequence of studies within the United States and of future consideration by the international community.

The Bureau of the Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report.

Sincerely yours,

WILLIAM B. MACOMBER, JR.,
Assistant Secretary for
Congressional Relations.

Senator SPARKMAN. I understand that Senator Pell wishes to open the hearing by saying a few words about the resolutions sponsored by him.

Senator GORE. Mr. Chairman.

Senator SPARKMAN. Senator Gore.

APPEARANCE OF SECRETARY OF STATE IN PUBLIC SESSION

Senator GORE. Before the hearing begins, I would like to submit a motion and ask that it be inscribed on the agenda of the committee for action in executive session.

Senator SPARKMAN. May I say there will be an executive session tomorrow.

Senator GORE. May I be recognized to offer this motion?

Senator SPARKMAN. All right, Senator Gore.

Senator GORE. I move that the chairman of the committee be authorized to communicate to President Johnson the concern of the committee on the breakdown in public communication between the Executive and the Senate which arises out of the refusal of Secretary of State Dean Rusk to testify in public session before the Senate Foreign Relations Committee on United States policy in Southeast Asia.

Mr. Chairman, I would like two minutes to make a brief statement, if I may.

Senator SPARKMAN. All right.

PUBLIC EXAMINATION OF VIETNAM POLICY

Senator GORE. Mr. Chairman, the country is deeply troubled and deeply divided over a costly and bloody war. We need unity in our country very badly.

If upon thorough public examination a policy can be justified, then there is a possibility of unity in America. If the policy cannot stand public examination, then the policy should be changed. The American people have a right to know for what cause their sons are being sent to fight and die. What are the objectives, intermediate and long range? Is it a true cause? Is the national interest truly involved? For what lesser cause would men be sent to die?

These issues are so vital that we need to discuss them thoroughly, and before the American people whose Government it is, whose sons are dying.

The Secretary of State has not appeared in public session with respect to the Vietnam war, nor has the Secretary of Defense, in nearly two years. Why is the President unwilling, or his principal Cabinet members, to appear in public session on this vital policy?

I submit that it is in the national interest to preserve the cooperation and mutuality of responsibility between the elected representatives of the people and the President of the United States.

This is why I am pressing this motion to take this issue squarely to President Johnson. Secretary Rusk is his agent. The Senate Foreign Relations Committee is the agent of the U.S. Senate. Communication between these two agencies is vital in the national interest. I ask, Mr. Chairman, that this motion be inscribed on the agenda of the committee for consideration tomorrow.

Senator SPARKMAN. As I stated a minute ago, there will be an executive session tomorrow, and I do not know what the agenda is, but the matter will be eligible for consideration, of course.

Senator GORE. Thank you, Mr. Chairman.

Senator SPARKMAN. Senator Pell.

Senator PELL. Thank you, Mr. Chairman.

LEGAL SYSTEM NEEDED REGARDING OCEAN SPACE

Man is advancing so fast in ocean engineering and technology that in a few years he surely will be able to reach and tap rich resources at any depth of the globe-girdling sea. When this happens, men and machines from any or many nations are likely to find they are compet-

ing simultaneously in the same submarine areas for identical resources.

This prospect convinces me that a system of law is needed to avoid the threat of anarchy in ocean space. By ocean space, I mean the seabed and superadjacent waters beyond territorial seas and continental shelves.

In this regard, I strongly support President Johnson's statement on July 13, 1966:

> Under no circumstances, we believe, must we ever allow the prospects of rich harvest and mineral wealth to create a new form of colonial competition among the maritime nations. We must be careful to avoid a race to grab and to hold the lands under the high seas. We must ensure that the deep seas and the ocean bottoms are, and remain, the legacy of all human beings.

Many plans are already afoot for organizing ocean space.

Some responsible people, such as the World Peace Through Law group, want its resources handled by an international agency and the usufruct either given to the United Nations or, as the Government of Malta has suggested, distributed among the poorer nations.

Others heartily oppose creating any legal system for ocean space at this time. They argue that its wealth should accrue to those whose enterprise and ingenuity have already achieved the technology required to exploit it and the means to defend it. This is known among maritime lawyers as the flag nation approach, in which, incidentally, I believe our own Pentagon and the Kremlin don't stand too far apart.

Between these two extremes, I would like to see our Government urge a middle course to bring about a generally acceptable legal regime. My Senate Resolution 186 would take the first step by having our United Nations representative call for a declaration of legal principles by the General Assembly.

If followed, these principles will give the edge to those nations who now are most technologically advanced and thus most able to take advantage of the resources available. But they will also permit others to build their own capabilities so that they, too, in time can compete freely for the underwater riches. In short, the regime I offer would not lock out for centuries those countries who are presently underdeveloped. If such a permanent lockout occurred, it could eventually lead to revolution, bloodshed, and war, as did the late great colonial empires.

NATIONAL SOVEREIGNTY EXTENDING INTO OCEAN SPACE

Specifically, the system I have in mind would forbid the extension of national sovereignty into ocean space, just as recent treaties have done for Antarctica and outer space. It will establish instead a United Nations mechanism for licensing nations to exploit the commercial resources of deep oceans; the licenses would be awarded for finite periods on a renewable basis.

Like the treaties just mentioned, this system would encourage peaceful use of the area and prohibit the propaganda of a whole new generation of nuclear weaponry, which might otherwise be installed on the sea floor. It would also prohibit pollution of the seas from radioactive waste materials.

Finally, it would set up a United Nations sea guard to assure compliance with the licensing arrangement and other provisions of the regime. The sea guard would be fashioned after the U.S. Coast

Guard, whose long and successful operation would be an inspiring example to guide the new sea police.

INTERNATIONAL TREATY FOR OCEAN SPACE

After hearing testimony by the experts on my Senate Resolutions 172 and 186, and on Senator Cotton's resolution, I intend to propose with some temerity a suggested text of an actual treaty for ocean space. The treaty would take cognizance of the oceanologic and general maritime preponderance of both the United States and the Soviet Union, and also recognize the third force position of France as well as the historic importance of Great Britain and other nations by designating all the permanent members of the Security Council of the United Nations as the depository governments.

These then are the primary elements which I hope will soon be incorporated into an international agreement for the peaceful, fruitful use of ocean space. I know that in various segments of the executive branch of the U.S. Government, as well as in many corners of the United Nations Organization, wise and good men are discussing this subject. But I am afraid their talk is not moving us fast enough toward action, because the pace of technological growth is faster than the conversation.

We must avoid the threat of anarchy in ocean space. The civilized nations would look foolish indeed if this last, vast physical frontier should become a sort of watery wild west where the exploiter with the biggest "sea shooter" could become "king of the seamount" at the expense of legitimate commercial or scientific activity by others.

UNITED STATES SHOULD EXERT LEADERSHIP

Our own oceanologists and businessmen are speedily moving to learn more about and invest more in ocean space. Other nations are doing the same. A free-for-all is bound to ensue in this realm which is still unprotected by law and law enforcement.

To avoid trouble, the United States, with other oceanminded nations, should exert leadership now in setting up the proper legal regime.

Most immediately, too, I wish our Ambassador to the United Nations all success in his efforts to set up a Committee on the Oceans in the current General Assembly. Such a committee is vitally needed to study and reach conclusions on some of the same matters that concern us at this hearing. But certain member nations seem to be dragging their feet on this simple, necessary, and important first step. I trust we will do all we can to help Ambassador Goldberg help the United Nations move ahead on this matter.

Thank you, Mr. Chairman.

Senator SPARKMAN. Thank you, Senator Pell.

Our first witness this morning is the Honorable Norris Cotton, the author of Senate Joint Resolution 111.

Senator Cotton, we are glad to have you. We will be pleased to hear from you.

STATEMENT OF HON. NORRIS COTTON, U.S. SENATOR FROM NEW HAMPSHIRE

Senator COTTON. Thank you, Mr. Chairman.

Mr. Chairman and gentlemen of the committee, I have no prepared statement. I just wish to speak to the committee very informally and very briefly, before we have to go for rollcall, on the background and the purpose of Resolution 111, introduced by me.

I want to make it very clear that in introducing this resolution, I have no quarrel with the executive branch, the State Department, and certainly not with the United Nations, in this delicate matter of jurisdiction over the ocean bottom and the development of the marine sciences in oceanography.

However, I quite understand, Mr. Chairman, that the executive branch and, more particularly, the State Department, may well view with some opposition this kind of a resolution. I am in agreement with that general policy. After all, the Congress vested our foreign relations in the executive branch, in the State Department, and I have frequently opposed this matter of Congress offering advice at all times and places.

CONGRESSIONAL ROLE IN DEVELOPMENT OF OCEANOGRAPHY

I do want to emphasize, however, Mr. Chairman, that this matter of the development of oceanography has been peculiarly associated with the Congress. The statement of the President referred to by the distinguished Senator from Rhode Island indicates his attitude and is a fine statement. But it was in the committee on which I serve, the Commerce Committee, that we first began, not last year but two or three years ago, largely because of our distinguished chairman, the Senator from Washington, Mr. Magnuson, to try to do something about the development of oceanography, and the correlating of its activities.

Our study indicated that what this country was doing in the matter of oceanography was spread and strewed, if I may use the phrase, through various departments—the Atomic Energy Commission, Department of the Army, Coast Guard, Health, Education, and Welfare, Department of the Interior, Bureau of Commercial Fisheries, Bureau of Sport Fisheries and Wildlife, and so on, down. I could name a lot more dealing with this matter piecemeal.

The result was that Senator Magnuson and I—he invited me to join him as ranking minority member of the committee—introduced the bill which became law, and which created the President's Commission on Marine Science, Engineering, and Resources, for the purpose of trying to bring together, to correlate and make more practical and effective this Government's activities in the field of oceanography and marine sciences.

That Commission was appointed by the President, and on it Senator Magnuson and I serve, as representatives of the Senate, along with Congressman Lennon and Congressman Mosher on the part of the House, and with a group of distinguished scientists. That Commission is working in study groups, and trying to organize and recommend to the Congress a policy for our oceanographic activities.

To my mind, Mr. Chairman, that makes the interest of the Congress in this matter clear. It is somewhat different from the role that Congress might play in offering unsolicited advice to the State Department on various aspects of our foreign policy. I want to make that distinction very definite.

PURPOSE IN SENATE JOINT RESOLUTION 111

Now, my brief resolution would sound at first blush to be somewhat contrary to the attitude of the distinguished Senator from Rhode Island, because my resolution says go slow, rather than go fast, but I don't think actually there is a conflict between our attitudes. It is agreed that we must expedite our activities in opening up the secrets and the possibilities of oceanographic research and activities.

May I add that certainly there could be no objection to the United Nations plowing the ground and preparing the way in this matter of jurisdiction over the riches of the sea. But the purpose of my resolution is, in this particular field, to try to see to it that the Congress becomes accessory before the fact and not after the fact, in any definite international agreement in regard to the future of development of the ocean bottom. Mr. Chairman, I think that is extremely important.

Now, as to the form of my resolution, I would say very frankly to the committee, that the first draft of this resolution was prepared for me by representatives of the National Oceanographic Association. As far as I am concerned, this matter in my resolution of directing the American representatives in the United Nations to oppose action or to take any particular attitude, I think, might well be deleted. But I sincerely hope that the committee will consider, and I trust favorably report, a resolution which, in some way, reflects the attitude of the Congress, that while we are exerting every effort—and by "we," I mean the Committees of the Congress and the President's Commission—to develop, organize, and speed up our oceanographic activities, we must not precipitously move into an agreement over jurisdiction without Congress being thoroughly appraised of the situation.

I would add that the Commission on which Sentor Magnuson and I are serving is at this very moment giving careful study to the problem of jurisdiction over the ocean bottom. I think that is an added reason to justify an expression—I don't care how mild it is or how watered down it is—by the Congress that the Congress be informed we brought into any agreement placing jurisdiction in the hands of any body, international or otherwise.

CONGRESSIONAL ADVICE TO THE EXECUTIVE

This simply gives us elbowroom to do our job, and that is the whole purpose of my resolution. I am satisfied by the expressions of representatives of the Administration and of the State Department, that they agree to the extent that I am not suggesting that they would throw us into any hurried treaty or delegate to anybody in this matter hastily. But, I have been in Congress 21 years now. I know that the activities of our executive department have grown so large and are executed by such a myriad of public servants, that many times the right hand knoweth not what the left hand doeth. I simply feel, and

I feel very strongly, that a reasonable and a respectful and mild expression of the attitude of the Congress, the sense of the Congress, that it be fully and constantly advised in this field of establishing the important ground rule of jurisdiction of the ocean bottom, whose riches and potentialitiess we are now realizing are almost unlimited, is in order. The Congress, I repeat, was the pioneer mover in this area. It must be given the chance to know what is happening and in advance not have to wait until some treaty is presented to it, or not learn that we have delegated authority to somebody, some group in the United Nations. I repeat that the Congress should be fully and constantly advised.

Now, that is the whole story of my resolution. I agree thoroughly with the distinguished Senator from Rhode Island in his emphasis on the need for rapid and affirmative action.

I just want the Congress in the picture, and for the United States to have a policy such as our Commission is working on. And I would say that in my opinion it is a little too early to present a real form of a treaty on a matter as delicate as this jurisdictional matter. But I hope the committee will, not necessarily in the form in which I have introduced it, report a resolution along the line of mine, and bring about and effectuate the purpose that I have just outlined.

I thank you, Mr. Chairman, and gentlemen.

Senator SPARKMAN. Thank you, Senator Cotton.

Any questions?

AGREEMENT WITH OBJECTIVES OF RESOLUTIONS

Senator GORE. Mr. Chairman, I wish to congratulate Senators Pell and Cotton upon this initiative. It is a performance of the constitutional function of advice and consent in its highest and truest meaning.

So many people, perhaps because of the course of events, have come to regard the constitutional duty of the Senate with respect to advise and consent as one of consent almost exclusively. Here, two distinguished Senators are taking the initiative in a new field, a field in which initiative and action is needed.

It was my privilege and honor a few years ago to be a delegate to the United Nations, in which capacity I was assigned the task of debating an agreement on outer space with the Soviet Union and other members of the United Nations. This ultimately was agreed to, and the Senate ratified a treaty on this.

I hope that, partly as a result of this initiative by our distinguished colleagues, a treaty can be achieved in this new frontier. I wish to thoroughly and heartily express agreement with the objectives and the eloquent statements made by both of the Senators, and again to congratulate them, Mr. Chairman.

Senator COTTON. I thank the Senator.

Senator SPARKMAN. By the way, I believe it took several years to negotiate the treaty on outer space.

Senator GORE. Yes it did.

Senator SPARKMAN. And these things do not come about quickly or easily.

Senator Pell?

PUSHING FORWARD PUBLIC OPINION

Senator PELL. Mr. Chairman, I would agree with you that a treaty such as I propose would take years to arrive at. But I think one of our functions, as Senators, is to push forward public opinion, press the Administration to take stands on important issues. In this matter we must not let ourselves be overtaken by technology. For, unlike outer space where nobody is likely to occupy the moon for the use thereof, within 10 years people will be occupying and using ocean space. I realize that the draft I suggested will be changed, but at least it will push the treaty idea forward.

I would also agree with the Senator from New Hampshire, and thank him very much for his comments, his interest, and courtesy in this matter—for this advice on my part was utterly unsolicited. There is no question about that at all, and that is one of the reasons we are trying to press the Administration a little bit in this direction.

NUMBER OF OCEANOGRAPHIC AGENCIES

Another point the Senator from New Hampshire made was the proliferation in the United States of different oceanologic agencies. It is the same thing in the United Nations, because in the United Nations you have the Intergovernmental Maritime Consultative Organization, the Ocean Study Committee of the United Nations, Intergovernmental Oceanographic Commission of UNESCO, World Health Organization, getting into it, the World Meteorological Organization, Economic and Social Council, International Atomic Energy Agency, and the Food and Agricultural Organization.

This is another reason why some order should be maintained there, just as you are trying to do for the United States on the President's Marine Science Commission, which you and Senator Magnuson are on.

I thank you very much.

Senator COTTON. I thank the Senator, and I would say to you, Senator Pell, as I said before, that I think any difference in approach between your resolutions and mine is apparent rather than real.

WORKING THROUGH THE UNITED NATIONS

There is one other element. I do not want to bypass the United Nations. I have always felt that we should patiently continue to do all we can to work through the United Nations.

But there is an element in this oceanographic problem which was not as notably present in the matter of the exploration of outer space. That is the immediate riches, the material gains, the things of commercial monetary value which can be taken from the ocean's floor.

Now in the United Nations at the present time—I trust that this matter will adjust itself—but the have-nots in the United Nations have the votes, and the haves who support its activities are in the minority.

I want to see the have-nots thoroughly protected, see them realize the full extent of their share of what may be taken from the sea to feed and support humanity. But it presents a present situation which I think demands careful procedure.

I thank the Senator.

Senator SPARKMAN. Senator Clark, we have a rollcall on. Do you want to ask questions?

Senator CLARK. No; but I would like to make a very brief statement.

Senator SPARKMAN. Could you do that after we come back?

Senator CLARK. I cannot, but I would not need to hold you gentlemen, if I could just make a very short statement. It will be less than two minutes.

Senator SPARKMAN. Let me at this point introduce for the record a letter from the American Legion, which encloses two resolutions by that organization.

(The letter referred to appears in the appendix.)

Senator SPARKMAN. Senator Clark, may I just say, to give notice to the group, that at the conclusion of your statement, the committee will stand in recess for 10 minutes.

BREAKDOWN IN PUBLIC COMMUNICATION BETWEEN EXECUTIVE AND SENATE

Senator CLARK. Mr. Chairman, I understand the Senator from Tennessee, Mr. Gore, has made a motion that the chairman of the committee be instructed to communicate to the President of the United States the concern of the committee about the breakdown in public communication between the executive and the Senate, which arises from the refusal of the Secretary of State to testify before the committee in public session on United States policy in Southeast Asia.

I shall support that motion when it comes before the committee. I think it is well that it should have all possible publicity.

I agree with the rationale of the Senator from Tennessee. We are pretty close to a breakdown in communication between the Secretary of State and the committee, on a matter in which the people of the United States have a very great stake. I would hope that the motion would prevail.

SUPPORT FOR PELL RESOLUTIONS

With respect to the pending measure, before the committee, I, with deep regret, find myself in disagreement with my good friend from New Hampshire, Senator Cotton.

I would tend to support one of the other two resolutions offered by the Senator from Rhode Island, Mr. Pell. I would like to have a little bit more time to hear the testimony. But I do think that it is time for action now regarding jurisdiction over the ocean bed.

Thank you.

(Whereupon, there was a short recess.)

Senator SPARKMAN. Let us resume the hearing, please.

Our next witness will be the Honorable Joseph Sisco, Assistant Secretary of State for International Organization Affairs; accompanied by Mr. Leonard Meeker, legal adviser, Department of State; and Mr. Herman Pollack, Director of International Scientific and Technological Affairs, Department of State.

Gentlemen, we are glad to have you. We will be glad for you to proceed in your own way.

STATEMENT OF HON. JOSEPH SISCO, ASSISTANT SECRETARY OF STATE FOR INTERNATIONAL ORGANIZATION AFFAIRS; ACCOMPANIED BY MR. LEONARD MEEKER, LEGAL ADVISER, DEPARTMENT OF STATE; AND MR. HERMAN POLLACK, DIRECTOR, INTERNATIONAL SCIENTIFIC AND TECHNOLOGICAL AFFAIRS, DEPARTMENT OF STATE

Mr. Sisco. Thank you, Mr. Chairman.

I have a very brief statement which I would like to present to the committee as quickly as I can, if I may.

I am happy to appear before this committee to discuss some recent international developments concerning the ocean and ocean floor and, in that light, the joint resolutions being considered by this committee.

Leonard Meeker, the Department's legal adviser, and Herman Pollack, the Department's Director of International Scientific and Technological Affairs, are accompanying me to provide any information you may desire within their fields of activity.

INCREASING INTEREST IN MARINE PROBLEMS

In recent years, we have seen an upsurge of interest, both here and abroad, in marine problems, especially those having to do with the ocean depths and the seabed and subsoil of the outer oceans. In the United States, the Congress passed the Marine Resources and Engineering Development Act, which became law on June 17, 1966.

The Marine Council and the Marine Commission established pursuant to that act, are engaging in an active program of planning, study, and coordination, looking toward the adoption of sound national policy for the exploration and exploitation of the oceans in years to come.

Internationally, a similar interest in marine affairs has been apparent. The Intergovernmental Oceanographic Commission, an organization of UNESCO, has carried on invaluable scientific activities in oceanography; the Food and Agriculture Organization is closely concerned with fisheries; the World Meteorological Organization is concerned with the effect of the oceans on climate; the International Maritime Consultative Organization is interested in shipping problems and safety of lives at sea; and the International Telecommunications Union is concerned with communications over the ocean.

In this sense a large number of international organizations are exploring marine problems as seen from their own particular points of view. We run the risk of confusion and duplication unless something is done to relate all these activities more purposefully.

Under strong U.S. leadership, the Economic and Social Council of the United Nations asked the U.N. Secretary General in mid-1966 to begin a study of what might briefly be described as "who does what" in international marine activities, excluding fisheries. Specifically, the Council's resolution called for a study of the current state of knowledge of marine resources and techniques for their exploitation.

Building on this foundation, the U.N. General Assembly a year ago asked the Secretary General in effect to broaden this study, so

as to review the current state of knowledge as regards ocean sciences and to improve international cooperation. This study is also going forward. The Secretary General has been directed to report to the next U.N. General Assembly, just a year from now.

LEGAL ARRANGEMENTS FOR EXPLOITATION OF OCEAN SPACE

Meanwhile, more and more people have recognized that we stand at the threshold of what may be a very exciting period in scientific development in the marine field. We are already able to put a man down to the bottom of the deepest ocean trench, just as we are able to put a man above the earth's atmosphere into outer space. Soon we shall be able to perform a variety of tasks in what Senator Pell calls "ocean space," just as we are learning to do more and more useful tasks in outer space.

As recently as 1958, we thought it sufficient to provide for exploitation of the continental shelf in a convention prepared under U.N. auspices by the Conference on the Law of the Sea. That convention provided for the exercise of sovereign rights over adjacent ocean floor areas to a depth of 200 meters and beyond to the limit of exploitability.

What we must ask ourselves now is whether we do not need new legal arrangements for the exploitation of the outer oceans and the deep seabed, and whether we do not need a concerted international effort to stimulate and coordinate scientific exploration there. Essentially, that is what the discussion in the United Nations today is all about.

Our objectives with respect to a legal regime concerning exploitation of the deep ocean floor are readily identifiable. We desire a legal regime that will encourage the development and use of the deep ocean floor, that will avoid dangerous conflicts among the nations that will be exploiting the floor's resources and that will be broadly acceptable to the nations of the world.

IMPLICATIONS OF THE MALTA PROPOSAL

The focal point of international discussion, as has been noted, is the proposal made by Ambassador Arvid Pardo, the Representative of Malta, in the current U.N. General Assembly. Ambassador Pardo has proposed that the Assembly look toward a new international treaty which, in brief, would reserve the ocean floor beyond the limit of national jurisdiction exclusively for peaceful purposes and establish an international agency to assume jurisdiction over the deep ocean floor and its resources. In the original Pardo proposal, the financial benefits from the exploitation of these resources were to be allocated primarily to the less developed countries.

This is an interesting and suggestive proposal, but it obviously raises a great many difficulties and problems to which the answers are not easily found. The plain fact is that no one has yet had the time or the opportunity to think through completely the implications of the Pardo proposal and of other proposals calling for substantive action on the subject of the oceans.

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Specifically, we have little knowledge of the economic factors involved in exploiting the deep seabed resources presumed to exist but not actually located. No one has considered seriously the question of how to induce enterprise to undertake the risks of deep-sea exploration and exploitation if the financial benefits are to go to others.

We are far from ready to establish a new international organization to preside over this amalgam of uncertainties. Nor is there yet broad agreement on the general legal principles which ought to govern activities in the deep ocean floor. We must be concerned with these economic and legal factors, as well as the very important security considerations involved.

The discussion of the Pardo proposal in the General Assembly thus far has surfaced these problems and a great many more besides. As delegates have come to realize how little they actually know about these matters, many of them have been understandably cautious about moving too far or too quickly.

The Soviet bloc, for example, has taken a most restrictive attitude, even doubting the advisability of setting up a General Assembly committee on the subject. And others, while agreeing to a temporary committee, would give it only a highly restrictive mandate for the time being.

U.S. POSITION ON PROBLEMS OF INTERNATIONAL COOPERATION

Our own position, as set forth by Ambassador Goldberg on November 8, is, we think, a balanced and judicious presentation of both the possibilities and the problems of international cooperation as regards the oceans, and I would like, with your permission, Mr. Chairman, to submit that statement for the record.

Senator SPARKMAN. That will be received and printed. (See p. 8.)

Mr. SISCO. The Ambassador stressed the importance we attach to a comprehensive and responsible study, to the growth of international cooperation in exploration of the ocean floor and the development of general principles to guide the activities undertaken in this field.

Ambassador Goldberg maintained that the deep ocean floor should not become a stage for competing national sovereignties. Rather, it should be open to exploration and use by all States, without discrimination.

Recognizing that the first issue before the Assembly was how to organize itself to implement the objectives it considered desirable, Ambassador Goldberg recommended the establishment of a committee on the oceans which would act for the General Assembly in considering all marine questions brought before the Assembly. Such a committee would assist the General Assembly in promoting long-term international cooperation in the marine sciences and, in particular, assist the Assembly on questions of law, arms control, and problems of pollution.

Ambassador Goldberg pointed to the importance of beginning now to tackle the legal issues involved by developing general principles to govern States in their activities on the deep ocean floor. He emphasized the complexity of the issues and noted that treaties already exist which bear on the subject. The Ambassador affirmed the willing-

ness of the United States to participate fully in whatever studies are necessary in determining the future legal regime of the deep ocean floor.

STATUS OF A UNITED NATIONS RESOLUTION

I believe it will be of interest to the committee, Mr. Chairman, to know that some 47 countries have already spoken in the debate on the subject in the Political Committee of the General Assembly. An informal working group is now engaged in an effort to arrive at a broadly acceptable resolution. I would estimate that this working group would reach its conclusions within the next few days.

I cannot foresee precisely what action it will recommend, but I can say that on the basis of the information we now have, and on the basis of the detailed conversations which Ambassador Goldberg and his staff have pursued, that it is probable that a committee will be established—with an initial life of one year—to carry out on behalf of the General Assembly a review of some of the issues involved. We, of course, would expect to participate fully and actively in such a committee, together with a representative selection of other countries drawn from all regions and including States with important maritime interests.

In our consultations with the Members of Congress, we in the executive branch have stressed the complexity of the problems confronting us and the time it will take to reach satisfactory solutions of these problems. We have made it clear that we are only at the beginning of what will certainly be a lengthy process of national and international deliberation.

In such a situation we see great advantages in keeping open every desirable option. We are, moreover, fully sensitive to the rights, claims, and interests of American citizens and American enterprises in various aspects of maritime, fisheries, and other marine activities, and of course we are always guided in the first instance by national security considerations.

STATE DEPARTMENT ATTITUDE TOWARD PENDING RESOLUTIONS

In these circumstances, Mr. Chairman, we do not believe it would be desirable or helpful for the Congress at this time to go on record with any of the resolutions introduced in the two chambers. With specific reference to the two resolutions before the Senate, I believe that the proposal presented by Senator Cotton, stressing the importance of caution, has already been reflected in the position we have taken at the General Assembly. I do not believe that the General Assembly will be taking the kind of action against which Senator Cotton's resolution was designed to guard. I would therefore suggest that no action need be taken on this proposal.

Senator Pell has introduced two resolutions. His views are most useful and most timely, and they will be taken fully into account by the executive branch. The first resolution would express the sense of the Senate on six broad propositions concerning the use of ocean resources, conservation, freedom of exploration, arms control, the limits of the continental shelf, and criminal jurisdiction. Senator Pell's second resolution expands on these propositions and sets out in great detail

a number of legal principles that might be adopted by the General Assembly.

We firmly believe that a great deal of value has been accomplished, Senator Pell, by the mere introduction of these resolutions. They provide a very useful focus for thought and planning.

The Department is directing serious attention to the broad range of problems enumerated in these resolutions. The Arms Control and Disarmament Agency is studying the practicability and national security implications of nuclear arms control measures applicable to the deep ocean floor. This activity is being coordinated with the Department of Defense and other branches of the Government concerned.

In conclusion, Mr. Chairman, let me assure the committee that we intend to continue our consultations with interested committees and Members of the Senate and House of Representatives as the international discussion on the subject moves forward.

Mr. Chairman, I would be very glad to address myself to any questions. I have with me, as you know, Leonard Meeker, the legal adviser of the State Department, who is very knowledgeable on the legal side; and Herman Pollack, who is deeply involved in the scientific aspects of this problem, and I would hope to be calling upon them as well.

Senator SPARKMAN. Thank you very much, Mr. Secretary.

I shall ask you just two or three questions and then call on Senator Pell.

DEEPEST OCEAN TRENCH

You say, "We are able to put a man down to the bottom of the deepest ocean trench." Just how deep is that?

Mr. SISCO. I would like to have Mr. Pollack address himself to that, if I could.

Mr. POLLACK. It was in the bathoscope, Trieste, that extended to about 35,000 feet.

Senator SPARKMAN. Is that the deepest spot in the ocean we have been able to find so far?

Mr. POLLACK. Let me ask Dr. Frosch.

Dr. FROSCH. Yes; that is the deepest place that we know.

Mr. POLLACK. The answer is affirmative.

Senator SPARKMAN. Where is it?

Mr. POLLACK. The Marianas Trench.

Senator SPARKMAN. Oh, yes. Is that in the Mariana Islands group?

Mr. POLLACK. Yes.

Senator SPARKMAN. Have we actually put a man down to that depth.

Mr. POLLACK. Yes, sir; they were able to take some photographs of the ocean bottom at that depth.

ANTARCTIC TREATY

Senator SPARKMAN. Now, as you say in your statement, we have a treaty, have we not, dealing with the Antarctic?

Mr. SISCO. Yes, sir.

Senator SPARKMAN. Was it formulated under the United Nations?

Mr. SISCO. Mr. Chairman, the Antarctic Treaty was developed and concluded outside the framework of the United Nations. Actually, a group of the interested States got together and began the consultation

process, and from it came the Antarctic Treaty. It was the Outer Space Treaty, of course, that largely originated in the U.N.

Senator SPARKMAN. Yes. It took some little time to negotiate the Antarctic Treaty, as I recall.

Mr. SISCO. The Antarctic Treaty, I think, took several years from the beginning of the discussions before it was actually concluded.

Senator SPARKMAN. It seems to me there is a great deal of similarity between the conditions existing in the Antarctic and in the field of oceanography.

Mr. SISCO. Yes; I think, in general, that is true. I think that one basic difference is the immediate accessibility of the oceans, particularly, as it relates to the resources which may or may not be there. I think this is a point, for example, that Senator Cotton made just a moment ago in his own statement.

Senator SPARKMAN. Senator Pell.

Senator PELL. Thank you, Mr. Chairman.

I was very interested in your statement, and thank you for it, Mr. Secretary. A couple of points come to my mind.

EBB AND FLOW OF POWERS OF COUNTRIES

You cite the various requirements for legal order in the oceans. There is one requirement there, it seems to me, that is omitted. You say here that our objective of the legal regime is that it will encourage development and use of the ocean floor, avoid dangerous conflicts among the nations exploiting resources, all of which would make it broadly acceptable to the nations of the world.

I think there is a further factor or dimension here that has not been included, and that is a system that would provide for change, because history has shown that countries have an ebb and flow in their own power.

We have seen the terrible wars that have ensued with the dissolution of the empires, such as the Ottoman Empire, the Hapsburg Empire, before that the Roman Empire.

The American empire, the Soviet Empire, and the other great nations of today may not be permanent. You may have other nations coming along, and whatever system there is, it would seem to me, should provide for this ebb and flow. This is why I wanted to direct your attention specifically to the concept that I am trying to introduce of a licensing arrangement, whereby it would be on a 10-year, 20-year, 30-year renewal period, which might provide for this ebb and flow.

I was wondering if you had thought about that, or if you or Mr. Meeker had any views on this subject.

FLEXIBLE LEGAL PRINCIPLES

Mr. SISCO. First of all, in general, I would certainly agree with what you said, because, obviously, any regime that is established in the future will have to take into account not only the primitive state of our knowledge, but the very fact that there will be changes as our knowledge increases. Consequently, I think the omission of this concept as a general concept is one which is inadvertent and it might very well be usefully made explicit with respect to our own attitude.

Insofar as licensing is concerned, I think Mr. Meeker is knowledgeable on this point and will want to address himself to it.

Mr. MEEKER. Mr. Chairman and Senator Pell, there are many different possibilities in the whole range of conceivable regimes for the ocean floor. We in the U.S. Government will want to make a very careful study of that broad spectrum, and no doubt other countries will wish to make comparable studies themselves.

I think this is certainly one of the possibilities that we will want to consider very carefully. Above all, it seems to me that your principle of flexibility and of adopting a regime which, on a continuing basis, responds to realities in the world, is a very important principle that we will certainly want to give most careful thought to and give effect to in whatever regime we ultimately do adopt.

POSSIBILITY OF AN OCEAN SPACE TREATY

Senator PELL. Mr. Sisco, from the viewpoint of your own good commonsense, when do you believe, in fact, some sort of ocean space treaty will come into effect?

Mr. SISCO. I don't have any hard and fast notion about this, Senator, and probably this is reflective of my own ignorance. I do, however, draw two analogies, the one which Senator Sparkman mentioned, that is, the length of time that it took us to work out an Antarctic Treaty, and perhaps what is in some ways the better example, the Outer Space Treaty. I can recall when we first established the Outer Space Committee back, I think, in 1958. Here we are, 9 or 10 years later, and we now have a treaty. I, myself, would be willing to go out on a limb—it is a sheer, uneducated guess, but I think we are really talking about at least a decade of work.

Senator PELL. The difference, though, is that in outer space there are no nice manganese nodules to be plucked by the spacemen as they wander around. There are no immediate economic incentives to move in those directions. But in ocean space, you may soon have a capacity to drill oil wells beyond the continental shelf.

So, it would seem to me that very soon some of our more imaginative and aggressive oil companies may well be digging in ocean space. Should we not therefore move a little faster than we did in outer space?

Mr. SISCO. As you know, Senator Pell, we are in favor of moving as rapidly as the accumulation of knowledge will permit. The executive branch is now involved in a very detailed study, and we would hope that we can begin to move ahead with reasonable speed.

Within the U.N. context, we hope a study committee will be established within the next few weeks. This committee will not only get into the various aspects of the problem that I mentioned earlier in my statement, but the Secretary General about a year ago was also asked to put together a very comprehensive study.

Our assumption is that this study pursuant to his mandate, will be ready next year. Therefore, my assumption is that the work on the national scene, as well as that on the international scene, one energizing the other, and the interests of the Congress, will move this matter ahead as rapidly as possible.

UNITED STATES TAKING THE LEAD

Senator PELL. I am sure you are more familiar than I with those two basic rules of diplomacy: one is the man who gets the first paper in, provides the framework on which the other ideas are attached, and those ideas survive, and the other basic rule of diplomacy, which is that you always let the other man have your way.

In both of these connections, would it not be to our advantage to table, to use in the sense of the United Nations and not in the cognizance sense, a piece of paper or document really very soon, incorporating our best thinking?

Mr. SISCO. Senator, you are not only showing, you are reflecting your experience in the Senate, but likewise your previous experience in the State Department. I agree with both points that you have made.

My answer to your comment is this: we are taking the lead in this six-nation working group which today, is focusing in New York on the precise details on a resolution, because we would like to get such a proposal adopted. We have had about 50 countries that have already spoken. The general debate is completed.

We have actually taken a very substantial lead within the framework of this working group, and my hope is that what will come out will reflect a very reasonable approach and will provide the international instrumentality for quick and further study.

STEPS TAKEN TOWARD AN INTERNATIONAL UNDERSTANDING

Senator PELL. Another question, either for you to reply, or for Mr. Pollack to reply to is, what actual steps has the interdepartmental committee under the chairmanship of Mr. Kohler, what actual steps have you taken to press ahead in this field of an international understanding or arrangement?

Mr. POLLACK. I think the general answer to that, Senator Pell, is that a number of working groups and task forces have been established to consider the variety of problems that are posed by the future of the ocean floor, and that the principal consequence at this point in time has been to scope the problem, to examine some of the possible alternatives.

Senator PELL. To scope the problem?

Mr. POLLACK. Yes.

Senator PELL. That is a new phrase since I have been in the State Department.

Mr. POLLACK. To determine the parameters of it.

Senator PELL. To delineate?

Mr. POLLACK. Delineate, ascertain the dimensions, but this is the first chore that the interdepartmental groups addressed themselves to, and we have been considering some of the alternatives, some of which have been incorporated in comparable fashion in your resolution, but at this point in time this work is currently underway, and conclusions have not yet been reached.

ATTITUDES OF OTHER NATIONS

Senator PELL. Would you be willing to hypothesize the attitude of other nations? We know the Soviet Union is dragging its feet. I have

heard that Great Britain, who has let the maritime affairs pretty well be dominated by the industry groups involved, is somewhat dragging its feet. Are there any other nations? Is that a correct statement; and are there any other nations dragging their feet in this regard?

Mr. Sisco. I think, Senator Pell, we can get a fairly clear idea as to what the attitude of the nations of the world is at the present time, based on the some 47 or 50 general debate speeches that we have heard in the last few weeks.

We did a little analysis of them. Of the representatives, who spoke, 23 spoke clearly in favor of the immediate establishment of a committee, and 23 have spoken in favor of giving this committee broad terms of references that the United States would like.

Then there are all sorts of reflections of lack of knowledge on this subject. You have a variety of proposals that have been presented by one country or another. One reason why we are very interested in establishing this committee on the oceans is that it is in this committee that a number of these proposals ought to be examined very carefully.

When you say the Soviets are dragging their feet, if you have a very careful look at their speech, I think the Soviet emphasis is really on study, the lack of knowledge, caution. I think they are extremely reserved on the notion of the General Assembly becoming involved, and the notion of establishing a committee, much more reserved than a good many others.

Senator Pell. I read Mr. Mendelevich's statement, I think it was, very carefully. I would agree with you, but detected through it, the desire to not let the U.N. get into this, and to leave it up to the individual nations. At least, this message came through to me.

COMMENTS ON PELL RESOLUTIONS

One final question, because I realize there is a rollcall vote going on. With regard to my Resolution 172, as you gather, it would move in three steps. First, I have introduced a statement of six basic principles.

Then I sought to refine it with a more specific resolution, and I have even had the temerity to think of fielding, or putting into play the text of a treaty with no idea that it will be adopted word for word, and paragraph for paragraph.

If a few of the ideas stay in it, I will be delighted. Have you had a chance to look at the more detailed resolution?

Mr. Sisco. I have, Senator.

Senator Pell. Would you give me, maybe, as many specific comments as you might feel able to do?

Mr. Sisco. I would merely say that this is a useful document from the point of view of a number of the principles that are stated, and when we get to that particular stage, I think it is one that we would want to study very carefully.

I think there is no quarrel whatsoever in terms of the objective, as I think I have tried to make very clear. It is largely a question of time, study, knowledge, so that the appropriate conclusions can be drawn in such a way that our interests, as well as the interests of the international community, are protected.

Senator SPARKMAN. The committee will stand in recess for 10 minutes while we go to vote.

(Whereupon, there was a short recess.)

Senator SPARKMAN. Let us resume the hearing, please. Senator Pell, you may continue with your questioning.

Senator PELL. Thank you, Mr. Chairman.

DEVELOPMENT OF AN INTERNATIONAL SEA GUARD

This question on the international sea guard is one that has always interested me. In fact, I would like to ask the chairman's permission to insert in the record at this point a memorandum I wrote on this subject in 1944, the point of which I think is equally applicable today.

Senator SPARKMAN. Is that a high school theme?

Senator PELL. No; no. Ten years later.

Senator SPARKMAN. Without objection, it will be inserted.

(The memorandum referred to follows:)

FEBRUARY 22, 1945.

Subject: International Peace Enforcement and the Future of the U.S. Coast Guard.

1. It is clear that the majority of persons in the Allied camp desire that out of this war will be borne an organization effective in enforcing world peace. It is equally clear that public opinion, informed as well as uninformed, supports the view that such an organization must be founded on force, unchallengable might to compel all men and nations to settle disputes by peaceful methods. Public opinion leaves it to the "experts" to decide what kind of an organization can best attain this objective.

2. Again it is clear that the "experts" disagree with each other on methods. Considerations as to the composition of an "international police force", for instance, raise serious questions: How can any strong nation's Army and Navy be acceptable for such work when the very spirit of an Army and Navy is founded on intense nationalism? On the other hand, how can any security minded nation be persuaded to eradicate this spirit of nationalism in its armed forces in order to qualify them for international police work?

3. This sketchy memorandum does not attempt to indicate solution to these and the other immense issues. It does intend, however, to point up and indicate for further study the fact that the U.S. Coast Guard has unusually appropriate qualifications which fit it for an important post-war international role.

4. Regardless of the type, kind, and composition of an international peace agency, maritime policing will be one of its necessary functions. An international maritime police force will be required to enforce the parent organization's policies regarding international navigation practices, air-sea rescue, safety regulations, fisheries regulations, tariff and contraband regulations, aids to navigation regulations systems and devices, port security and operation, ice and weather patrols, etc.

5. These and many other duties and responsibilities of an international maritime police force are only semi-military in character. They are of a constructive, humanitarian character not identified with a nationalistic military outlook. They should be assumed by an organization whose primary function is constructive, not destructive, whose job is primarily peace, not war, whose reputation is for benevolence, not belligerence.

6. The U.S. Coast Guard is the outstanding organization in the world today that meets these requirements. Its past includes experience, on a small scale at least, in all the fields of maritime control mentioned above. It is the logical choice for this vital task and should be nominated for it. At the same time work should be gotten underway to equip those who would present this proposal on behalf of the United States with the details of the Coast Guard's past and present experience and the Coast Guard's own ideas of methods and administrative policies. Collaboration between Coast Guard and State Department personnel and other officials chosen to represent the United States at international peace conferences would be necessary, but first the Coast Guard's qualifications and availability for this task must be brought to the attention of and be accepted by the highest offices.

Senator PELL. Thank you. I have always been struck by the fact that, in spite of all our brave hopes in San Francisco, where several of us were, for the creation of a military staff committee and some kind of U.N. force, we never really got it going. It has occurred to me through the years, that perhaps the best way to do this would be through some kind of international seaguard. For there is already acceptance of the fact that we have international supervision of pelagic sealing, the fisheries, weather patrol, and points of this sort. I was wondering if you had any views, Mr. Sisco, as to the development of an international seaguard which would be part and parcel of any ocean space treaty to provide the enforcement means, and from this it could lead into the concepts that we discussed in articles 42, 43, and 44, I think it was, of the U.N. charter a good many years ago.

U.S. EFFORTS TO STRENGTHEN U.N. PEACEKEEPING CAPACITY

Mr. SISCO. Senator, as you know, the United States has really been in the forefront of trying to strengthen the peacekeeping capacity of the United Nations.

I would say that we have been absolutely outstanding in this regard. The thing that we have been able to achieve has been a very modest success in the first 20 years, not forces that are used pursuant to chapter 7 of the charter and enforcement action per se, but rather peacekeeping forces, that have been largely put together on an ad hoc basis. They have operated on the soil of one country or another, based on the consent of that particular country.

As you say, in the first 20 years we have not been able to establish forces in the enforcement sense, as originally envisaged in the Charter of the United Nations.

I think, myself, that our efforts have to continue. My hope has always been that the modest successes that we have achieved with respect to peacekeeping forces will continue to move us toward a stronger peacekeeping system within the framework of the U.N. But there are many difficulties of which I know the Senator is fully aware: political, financial, and otherwise. Insofar as the idea of a sea guard, specifically, and particularly a sea guard that would be used in the enforcement sense, as you have indicated, it seems to me that one of the preconditions would be to know a little more clearly the kind of legal regime that we are talking about in the first instance.

But I think this is a useful idea that we must keep under review, because I have always felt, and I think it can be demonstrated in the history of the United Nations, that the national interest of the United States has certainly been served by whatever peacekeeping actions the organization has been able to take.

I can foresee, Senator Pell, a future need for land forces, and it is altogether possible that we need something on the seas as well. I can recall, myself, during the Suez crisis when we were talking in terms of a U.N. patrol in and along the Suez Canal itself, so that I think this is an idea that is worth looking at on a continuing basis.

IMAGE OF THE UNITED STATES

Senator PELL. I thank you. This is, obviously, an idea that has always been dear to me. I remember as an assistant secretary on the Committee on Enforcement Arrangements in San Francisco, we discussed this idea. And I am still in the Coast Guard after 25 years, and have followed it right along.

I also think that it is in our national interests because so often we have the image of a warmaking power. We know we are good guys, but as others see our ships and weapons of war around the world, they are not convinced.

On the other hand, our Coast Guard has a remarkable history of lifesaving and law enforcement. I remember in Lisbon, before World War II, they had the battleships of France and Germany and Britain all in the Tigris River there, and then, like a big, to use that very unpopular phrase now, "dove of peace" came in a Coast Guard cutter painted white, and it gave a whole different image to the United States compared with those other nations.

My thought is that the Coast Guard really has provided the framework, the nucleus, for such an international sea guard, and this could come out of consideration of this treaty. It would be a very good step for our national interests.

LIMIT OF THE CONTINENTAL SHELF

I have another question here in connection with the depth, the limit, of the continental shelf. I am more or less fixed on the idea that it should be 600 meters, because if you use the depth of 600 meters, you then automatically exclude any areas that can conceivably be a continental shelf anywhere in the world. And since, as I pointed out earlier, we are already developing far beyond the old 200-meter limit, I was wondering if you or Mr. Meeker had any thoughts about accepting the idea of 600 meters and making it firm, because, as you know, the arrangements at Geneva a few years ago left it terribly fuzzy.

Mr. MEEKER. Senator, we certainly agree that article I of the Convention on the Continental Shelf does not provide the answer that is going to be required on this subject. As you probably know, there is a provision in the treaty for its review, with a view to amendments, five years after it entered into force. That point arrives about a year and a half from now.

I think that we are going to need to have some new agreement which will delimit the edge of the continental shelf, which appertains to the coastal state, and areas that lie beyond it.

There are many problems in defining a line that will be realistic from the point of view of the geological formations, and also acceptable from the point of view of the many countries that are going to have to give their assent before we get a firm international agreement.

But I would hope that out of the process of consideration and negotiation that will have to go on, we will get a perfectly clear

and satisfactory definition. I think the suggestion of a standard depth is one that we will certainly want to give most careful thought to and see what its implications are as it is applied in different parts of the world.

DISCUSSION OF A 600-METER DEPTH

Senator PELL. I wonder if you could sharpen that statement a bit, and give me a reaction as to whether you lean toward the idea of an arbitrary fixed 600-meter depth, or rather lean away from it?

Mr. MEEKER. I think it is difficult to say at this time. One of the complications here relates to the claims of some countries to very wide bands of territorial waters. Now, those claims are made most often in areas where the ocean becomes deep quite near the shore.

Senator PELL. If you will excuse me for interrupting, there is no relationship between territorial waters and continental shelf.

Mr. MEEKER. There need not be. The problem on the west coast of South America, for example, is that because the waters become deep very rapidly, there is no continental shelf in the sense that people understood it back in the 1940's and 1950's. This was what led some of the west coast countries to make claims on territorial waters out to 200 miles. This is one of the practical factors in the world situation that we have to cope with in trying to decide where the continental shelf extends, and where it should end.

I simply mention this because it is a problem in following with complete consistency a rule which would be limited to depth of water. Depth of water may be an important factor. Other factors may have to be taken into account, also.

TERRITORIAL JURISDICTION

Senator PELL. A question of fact, or of law: if a murder is committed on a Texas tower built beyond present territorial limits, what jurisdiction applies?

Mr. MEEKER. That is somewhat difficult to determine, but I would think one could make out an argument that the tower being affixed to the shelf, and the shelf being under the jurisdiction of the coastal state, the jurisdiction of the coastal state would attach. It seems to me that a strong argument can be made out in that sense.

Senator PELL. Here—and I don't mean to put a plug for my book, "The Challenge of the Seven Seas" published by Morrow & Co., but—we discussed the building of a seamount on the continental shelf, but maybe our technology would be beyond the shelf. In that case, where would the jurisdiction lie, if the murder was committed on that seamount?

Mr. MEEKER. I think that very question illustrates some of the problem that we have before us.

Senator PELL. Exactly.

Mr. MEEKER. There is today no definitive, accepted legal regime out beyond the continental shelf. It is one of the things which has to be developed and agreed.

Senator PELL. If a nation developed a deep trawler that picked up some of these manganese nodules and another ship came along or a submersible came along, cut the ships' lines and took them away, hi-

jacked them, as we used to say in prohibition days, when I was in high school, what jurisdiction would apply?

Mr. MEEKER. I think there is a good question as to the right of a country today to remove and to keep for itself minerals which might be found on the deep ocean floor. This fact of uncertainty is something that operates in the minds of companies and enterprises that are considering the possibility of this kind of activity.

As to an effort by one vessel to take over what might be on board another vessel——

Senator PELL. No; underneath the surface of the sea.

Mr. MEEKER. You could very well have a very close analogy to piracy at that point, but again it seems to me that the only way in which these questions are going to be clearly and definitely settled is through the development of a suitable regime.

NEED FOR LEADERSHIP

Senator PELL. I think these wonderfully phrased and delightfully fuzzy, if you will forgive me, replies define the need for moving just in this direction. Now it has generally been maintained by the Executive that they should lead the way. I think in many cases we on the Hill should do the leading, and it is one of our functions, I think, that we will do what we can—I will, certainly—to try and press forward in this direction, so that we can field, or table, the first draft that is more nearly in accord with our national interests and the international interests of the world as we determine it.

I thank both of you very much.

Senator SPARKMAN. Thank you very much, gentlemen.

Mr. SISCO. Thank you.

Senator SPARKMAN. Our next witness will be the Honorable Paul C. Warnke, Assistant Secretary of Defense for International Security Affairs, accompanied by Dr. Robert A. Frosch, who is Assistant Secretary of the Navy for Research and Development.

STATEMENT OF HON. PAUL C. WARNKE, ASSISTANT SECRETARY OF DEFENSE, INTERNATIONAL SECURITY AFFAIRS, ACCOMPANIED BY DR. ROBERT A. FROSCH, ASSISTANT SECRETARY OF THE NAVY FOR RESEARCH AND DEVELOPMENT; AND LEIGH RATINER, OFFICE OF ASSISTANT GENERAL COUNSEL, INTERNATIONAL AFFAIRS, DEPARTMENT OF DEFENSE

Mr. WARNKE. Thank you, Mr. Chairman. I also have with me Mr. Leigh Ratiner, of our Office of Assistant General Counsel for International Affairs..

It is a pleasure to appear before this committee this morning to testify with respect to Senate Joint Resolution 111 introduced by Senator Cotton and Senate Resolution 172, introduced by Senator Pell. It is my understanding that the committee is also considering Senate Resolution 186 introduced by Senator Pell on November 17, 1967.

Because of the evolving capability to exploit the oceans' living and mineral resources, and with their strategic importance becoming of

greater significance to all the maritime nations of the world, the consideration of a legal regime for the ocean bottom raises questions of increasing complexity. The U.S. Government and numerous international organizations have begun comprehensive studies in an effort to determine how the oceans can best be explored and exploited for the benefit of the world community. Because so much remains unknown, this process will be a long and arduous one.

At the present time there is little knowledge of the qualitative and quantitative distribution of deep ocean mineral resources.

Although the United States is accumulating significant oceanographic data at an unprecedented rate, it must be recognized that the nature and character of the deep oceans and their potential for sustaining and enriching human life are still very largely unknown.

LIMITS OF THE CONTINENTAL SHELF

The ability to exploit the deep oceans for their mineral resources focuses attention on unsettled areas of international law. Our enhanced technological capability to explore the oceans already makes us question what should be the appropriate breadth of the continental shelf. At the present time technology exists which permits exploitation at 200 meters and exploratory drilling up to 2,000 meters. As I am sure you are aware, the 1958 Geneva Convention on the Continental Shelf defines the outer limit of the area adjacent to the coast in which a coastal state may exercise rights over the resources of the seabed and subsoil as being to a depth of 200 meters or beyond that point to where the depth of the water admits of exploitation of the resources.

As Mr. Sisco and Mr. Meeker have pointed out, this is an indefinite and imprecise limitation at the present time. As Senator Pell has pointed out, his Resolution 186 would call for a continental shelf out to the 600-meter depth. In my view, we are not in a position yet to know whether this is far too narrow, far too wide, or possibly just right.

Congressional policy in this field is manifested in the Marine Resources and Engineering Development Act of 1966. Pursuant to this policy, announced by Congress, the executive departments concerned are engaged in careful study to decide whether to recommend suitable amendments to the Convention on the Continental Shelf which would, with a greater degree of specificity, delimit the regime of the continental shelf.

It should be noted in this regard that the convention provides for submitting suggested amendments in 1969, five years after its effective date. The executive branch study is still in progress on that and numerous other problems which are raised in the various resolutions before the committee.

CONCERN AND INTEREST OF DEFENSE DEPARTMENT

Of course, the primary concern and interest of the Defense Department in these developments arise out of their interrelation with the use by the United States of the ocean environment for purposes of maintaining or enhancing our national security.

It is very clear that any proposals affecting military uses of the ocean or deep ocean floor would have to be considered in the same light as arms control measures in these environments. Such proposals, like other arms control measures, would have to be evaluated from the standpoint of national security.

Since World War II the strategic importance of the oceans has increased. The submarine threat to the United States has been and is expected to remain a very serious consideration in defense planning.

The effectiveness of detection, classification, localization and tracking of submarines depends heavily on the environment in which they operate. At the present time there is insufficient information about this environment to predict accurately the precise needs the United States will have for the oceans and their bottoms.

A vital segment of our strategic deterrent forces is sea-based. The Polaris and Poseidon underseas launching systems provide us with significant strategic deterrent capability. The viability of the submarine-based missile force to a very large degree depends upon concealment and dispersion, as well as mobility.

The importance of existing or potential sea-oriented systems is of such magnitude that I deem it essential at this time that we not foreclose options involving the use of the ocean space as well as its seabed, without conducting a very careful study of the many complex considerations involved.

DEFENSE COMMENTS ON PENDING RESOLUTIONS

Based on these considerations, the Department of Defense supports the need for care which is reflected in Senate Joint Resolution 111, rather than the proposals in Senate Resolution 172 and Senate Resolution 186.

Senate Resolution 186 contains many specific proposals which certainly merit very careful examination and consideration. Because this resolution largely supersedes Senate Resolution 172 and because of the limited time available to examine it, I am unable to provide the committee with anything more than our preliminary views on the points of particular concern to the Department of Defense.

With respect to Section IV of Senate Resolution 186, I feel strongly that it would be undesirable to prejudge any strategic or military options until such time as we have the information that would be required to make a sound judgment consistent with the security of the United States. Thus, until a thorough study is completed, which might reveal areas which are appropriate or inappropriate for consideration of arms control measures, I must oppose this part of the resolution.

Senate Resolution 186 also provides the "sea guard" to which Senator Pell addressed some questions. This would establish an enforcement mechanism under the direction and control of the Security Council of the United Nations.

There should be noted in this connection the difficult political and military problems inherent in the organizing of international peacekeeping or enforcement agencies or forces. The fact that these problems exist does not mean, of course, that an idea that has as much potential merit as this should not be carefully considered and explored, but in advance of developments which might lead to a legal regime for the

deep ocean floor, it seems to me premature to decide on the mechanics of enforcement.

I hope these preliminary views may be of some assistance to the committee. Of course, as I pointed out, in the very limited time available to work with Senate Resolution 186, it has not been possible to consider thoroughly or obtain coordinated views in the Department on these and many other issues which occurred to me after reading the resolution.

Nevertheless, it would be less than candid for me not to advise this committee that it seems obvious, even based on this preliminary study, that the Department of Defense could not support all aspects of Senate Resolution 186.

I would be very happy, sir, to respond to any questions that you or Senator Pell might have, or to refer them to my more informed colleagues.

Senator SPARKMAN. Senator Pell.

PREVENTING DEVELOPMENT OF WEAPONRY IN THE SEA

Senator PELL. Thank you very much, Mr. Warnke. I want to be sure that we both understand what section IV does, because section IV in no way would prevent the implacement on the ocean floor of any kind of monitoring devices or anything of that sort.

What it seeks to do, perfectly frankly, is to prevent the creating and the propagation of a new generation of weaponry in which we may well be ahead. We obviously can't get into classified subjects in this hearing, but in which we may well be ahead of the Soviet Union, China, or any other potential opponent.

But life being what it is, they will probably catch up to us, and if we could preclude this area, from the viewpoint not of protective devices but weapons of mass destruction as is indicated here, I wonder if you could say in this open hearing whether you think this might be against our national interest?

Mr. WARNKE. I think, Senator Pell, as you recognize, it is very difficult to deal with these questions in an open session. However, I think that there are certain things that we might point out.

One of them is the somewhat imprecise content of the term "peaceful purposes," and the fact that this might be something which would be subject to different interpretations by different signatories to any sort of a treaty. Another thing I would like to point out is that there are provisions for visitation, which could provide us with very severe security problems.

Senator PELL. The word "peaceful" could perhaps be changed around to "defensive" or some other word. I don't think this is an insuperable problem.

RELATION OF OCEAN BASE TO THE ARMS RACE

What does concern me is that 10 years from now we will have, and it will be a matter of public knowledge, in fact some of this has been in the press already, a whole new generation of weapons planted in the deeps of the sea or the mounds and the ridges in the sea. How can we prevent this development, even if we are a little ahead now? Or

would you consider that it would be a desirable objective, because we are a little ahead now, to keep moving further ahead?

Mr. WARNKE. I think there is no question of the dedication of the United States to the concept of restraining an arms race, and of entering into a meaningful dialog with the other great world powers, in order to restrain that.

What we are concerned about is the inability at the present time to determine just what part the ocean base and its seabeds may play in this overall picture, and we regard it, therefore, as premature to try and foreclose these uses in just this isolated segment of the world territory.

Now, another thing I would like to say—I forget what coach it was, but he maintained with some vigor that the best defense was a good offense, and as a result you would always have the question as to what the definition might be, and you could not be sure at the present time that we would be employing common definitions.

Senator PELL. This, of course, we all comprehend, the basis of our present strategy of nuclear, of massive—the balance of terror or whatever we want to call it, but with regard to your points here, the word "peaceful," as you say, can cause problems. Maybe some other word might be used.

QUESTION OF INSPECTION

In arms control negotiations our principal criticism of the Soviet Union is on the question of inspection, which they would not permit.

Mr. WARNKE. Senator Pell, I would like to point out that the entire question of inspection, of course, depends upon a couple of considerations. One of them is the breadth of the treaty involved, and the second one is the feasibility of policing. These are the kinds of questions that we feel require further exploration, before we could determine whether a provision such as section IV would be in our national interest.

PROLIFERATION OF WEAPONS IN OCEAN EXPANSE

Senator PELL. You also indicate some concern that we would have these limitations on, as you put it, a particular portion of the earth's surface, but it is 70 percent of the earth's surface, so it is a pretty large particular portion that we are talking about.

Mr. WARNKE. That is correct, sir, but it would not prevent the generation of a new species of weapons.

Senator PELL. Unless we took action quickly.

Mr. WARNKE. Well, my point is that unless 100 percent of the world's surface is covered, we aren't really putting an end to the proliferation and the increasing sophistication of weapons of destruction.

Senator PELL. My proposal would cover what I call ocean space, which has a legal definition, as you know.

Mr. WARNKE. Yes, sir.

Senator PELL. It is the ocean from the base up out to the limit of the territorial sea, the continental shelf, and then it includes everything from there on. It is a pretty well defined area, if we accept that definition. It is a pretty large area, too.

Mr. WARNKE. It is a large area, but as I have said, Senator, we don't feel that we know enough as yet about what our own security

needs are going to be in a world in which the concept of disarmament has not been accepted so that we could at this time or should at this time foreclose ourselves with respect to this large segment of the world's territory.

PROBLEMS OF AN INTERNATIONAL SEA GUARD

Senator PELL. I realize it is premature, and I am intentionally premature in trying to press public opinion and the executive branch on this, but would you perhaps be in a position later on to submit any written comments as to ways of making this language more acceptable to the Defense Department?

Mr. WARNKE. We would certainly be very happy to consider that and to endeavor to come up with a written statement, Senator.

Senator PELL. It would help our own judgment very much indeed. I completely agree with you in connection with the sea guard, the rather difficult political and military problems inherent to the organizing of international peacekeeping forces.

It is precisely because of these problems we have never been able to go ahead with what we envisaged at San Francisco in 1944–45 on the conference board. But perhaps the sea guard concept might provide us the very means to do it.

I am wondering if you could address yourself a little more specifically to where you see the problems. Even if there is no treaty would it not be a good idea to start creating the framework of some form of international sea guard to enforce the present international agreements that exist with regard to, as I mentioned earlier in the hearing, fishing, weather patrol and things of that sort.

Mr. WARNKE. That, Senator, is probably beyond my particular field of competence. I would like to say as a personal matter that the idea is a very attractive one to me, and my comments with respect to the sea guard were that I was unable to evaluate the role that it would play without it being sure first as to just what it would be enforcing, and it is the sea guard in connection with section IV which would give me my particular problems of national security at the present time. I certainly had no personal opposition to the concept of an international force of this sort.

ARMS CONTROL PROPOSAL

Senator PELL. I want to add here that section IV was drafted by me with considerable precision, in an effort to in no way inhibit the Polaris program, and it is not meant to, and I don't think that the general public should think it would have any effect on it. I would hope in your thinking you did not see an inhibition here.

Mr. WARNKE. I think, Senator, that that depends upon a prediction which I am not in a position to make at the present time on what the developments might be. I believe in this connection that Dr. Frosch might have some comments that he might give.

Senator PELL. Also, as was mentioned in the testimony, I think the witnesses here might be interested in the difference between Polaris and Poseidon.

Dr. FROSCH. The difference between Polaris and Poseidon is in the missile. The Poseidon is an improved missile over the Polaris.

Senator PELL. But both launched from nuclear submarines?

Dr. FROSCH. Both. One comment with regard to this particular arms control proposal is that it is not clear to me whether the particular kind of weapon that would fit in this prohibited class might not be more attractive from an arms control and world peace point of view than other classes of weapons which would likely be developed in the absence of this possibility.

The use of weapons at sea, at least has a possibility that the weapons and the weapon platforms (considered as targets) are well away from human population. Whether that becomes more of a consideration or less of a consideration as we move in the direction of arms control (or possibly move away from it) is not clear at this point, and I think it needs considerable additional study.

With regard to the matter of inspection, you will recall that the difficulty in most of the inspection discussions in the matter of nuclear arms control has been only with the unwillingness of the Soviets to allow inspection, but also with a number of technical questions that had to do with the feasibility of detection, and the feasibility of knowing where and what to inspect. And I think certainly with our present technology, there would be some considerable difficulties in this realm as well, particularly with defensive systems.

U.S. NAVY CONTRIBUTION IN FIELD OF OCEANOLOGY

Senator PELL. Another question here of general interest: Am I correct in saying that the Navy makes an input of more than 50 percent of the total moneys spent by the U.S. Government in the field of oceanology?

Dr. FROSCH. That is correct.

Senator PELL. About what percentage; 60?

Dr. FROSCH. It is around 50. It may be as high as 60. It depends a little bit on the definition you use.

Senator PELL. Right. I wish you luck with your conference and I trust you will be organizing an interface between private industry and the Government uses of it, and look forward to the lead the Navy Department will be taking in this matter.

Dr. FROSCH. Thank you.

Senator PELL. Do you have any reaction as to whether your opposite numbers in the Kremlin, in the Soviet Government, have a similar view with regard to the development of arms control measures in the ocean depths?

Mr. WARNKE. I am afraid I couldn't speculate about that, Senator.

Senator PELL. That is all, Mr. Chairman. Thank you very much.

Senator SPARKMAN. Thank you very much, gentlemen.

Mr. WARNKE. Thank you.

Senator SPARKMAN. Next we will have Mr. Clark Eichelberger of the Commission to Study the Organization of Peace.

Mr. Eichelberger, we are glad to have you with us again.

STATEMENT OF CLARK EICHELBERGER, COMMISSION TO STUDY THE ORGANIZATION OF PEACE

Mr. EICHELBERGER. I am delighted to be here. The Commission to Study the Organization of Peace was organized in 1939 to consider what would take the place of the League of Nations. We have been

going ever since, considering the strength of the U.N. I have had the privilege of talking to you about it many times.

RESOLUTION AS THE BASIS OF A TREATY

Mr. Chairman, I would like to say that I believe Senate Resolution 186 is historic. Senator Pell has produced the paper. I imagine that whether it takes five years or 10 years to produce an acceptable treaty, this treaty will be the model. He has included the central principles and outlined the essential machinery for a rational order of the sea. Many variations will be suggested but the basic outline of the treaty will remain.

And so I say that the resolution which he has introduced is one of the most historic steps taken in our time. I think so for several reasons.

In the first place, because of its timeliness. I must say, Senator, that I am impatient with those who say:

> Now we don't know enough, we must wait a while—we must wait until marine science is further developed, and the wishes and the self-interests of various nations are better known.

When that time comes it will be too late to establish a rational order of the sea. We know enough about the basic problems, they have been sufficiently exposed, to say that there are certain essential principles that must underlie a rational order for the sea.

The Senator has said there must be established a law of the sea as there was established a world law of outer space. Seven-tenths of the earth's surface has not been claimed by sovereign powers. Seven-tenths of the earth's surface is virtually up for grabs. Because modern technological development overnight makes it possible to explore great areas of the seabed, the nations might be on the verge of a new power or colonial struggle.

The President of the United States, who has been quoted this morning, warned against a colonial struggle for the sea. Senator Pell spoke of the danger this morning. I heard one of the delegates, in the debate going on in the General Assembly, point out that the world today is engaged in the decolonization process, the painful task of freeing the colonial world, with all of its dislocation. Now he said we are in danger of a colonial race for seven-tenths of the earth's surface. It can only lead to conflict, to agony, and will not give security to the industrialists and entrepreneurs of any nation.

Now, fortunately, the Senator's resolution presents a treaty. I would remind those who are afraid of what other countries might do, that a treaty must be subscribed to by the major powers in the world, and many of the smaller powers before it goes into effect. Senator Pell's treaty should become known to the United Nations as quickly as possible.

I want to say a word, if it's not out of place, of appreciation to those who spoke this morning who are cooperating with the Cabinet Council on Science and Technology, of which the Vice President is Chairman, and the Presidential commission which are working with great urgency to develop an oceanographic program for the President. I should like to express appreciation for the determination of Ambassador Goldberg of the U.S. delegation to secure, over the disagreement of some of the maritime powers, a committee on the sea as was

established for the Committee of Outer Space. Ambassador Goldberg wishes a comprehensive committee that will serve to coordinate all the many activities on oceanography in the U.N. and the U.N. agencies.

THREE PRINCIPLES IN PELL RESOLUTIONS

But I will say with equal frankness that sometimes principles must come along with specific plans. The President of the United States in 1961, immediately after the death of Dag Hammerskjold, asked the U.N. members to turn their eyes to the heavens and agree for the extension of world law to outer space, and to agree that the celestial bodies and outer space were not subject to appropriation by any state. This declaration of principles was followed by a treaty.

I wish, I hope it isn't too late, that our Government in the negotiations now going on in the U.N. for the drafting of a resolution, would insist on three principles which are incorporated in Senator Pell's resolution. They are absolutely essential to a rational order of the sea and the extension of world law to the sea:

One is that the bed of the sea beyond certain limits be not subject to appropriation by any state. We have not yet made it clear that it is our intention, beyond quoting the statement of the President.

Second, that the resources of the sea shall be so administered that not only will all nations have equal opportunity, but there will be special consideration for the underdeveloped states.

I have heard many speeches of the underdeveloped states. That is their greater concern, that the maritime powers are going to proceed to annex a great part of the seabed, and they will forever be excluded.

And then in the third place, the seabed is to be used for peaceful purposes only.

Now, one of the advantages of Senator Pell's resolution and the treaty to follow is that it is very comprehensive. For illustration, it includes both the resources of the seabed and the subsoil and the living resources of the waters of the sea. So far much of the present emphasis in the U.N. debate has been concerned exclusively with the seabed. The one criticism of Ambassador Pardo's resolution was that it did not recognize the connection between the living resources and the mineral resources.

ADMINISTRATION OF THE SEABED

The first report of the President to the Congress on marine resources and engineering development points out that because of the increasing number of fishermen, it may be necessary in the future to initiate new forms of international cooperation and management for the high seas fisheries.

The licensing feature is very important. Various plans will be forwarded for national exploitation of the seabed. There will be those who will wish to exploit the seabed and expect the flag to follow to protect them. However a U.N. authority to license the resources of the sea is the only practical suggestion that has been made, and I believe the only practical suggestion that will be made.

USE OF SEABED FOR PEACEFUL PURPOSES

The Senator has talked about the use of the bed of the sea for peaceful purposes only. American Air Force astronauts are carrying the heavy burden of exploration in outer space, and the American Navy will be carrying the heavy burden of mapping the bed of the sea and of photographing what is there. Over 50 percent of our oceanographic appropriations today go to the Navy.

I believe that all of that can be done without the introduction of new weapons systems on the bed of the sea. I would like to quote from Secretary McNamara's written testimony in favor of the outer space treaty. He said:

> The timing of this agreement is most important. This is an instance of locking the door before the horse is stolen.
>
> This is one of the instances when men from many nations have been able to act in concert to plan and control the future, to act before and not react to just scientific advance. This timing prevents the threat of new weapons systems into new areas now. This is certainly better than to try to control or reduce them later, after they have been developed and employed, after inertia and investment make it so difficult to pursue reductions in armaments.

And so I would say that the Navy will play the most important part in the exploration of the sea, but there is no reason why, in the treaty that Senator Pell proposes, the nations cannot agree as they did in outer space, that weapons of mass destruction and atomic weapons, will not be planted in the seabed. The Navy may cooperate with other states in one of the greatest peacetime opportunities for scientific discovery open to mankind. The area involves seven-tenths of the earth's surface for which scientific investigation has scarcely been taken.

INTERNATIONAL SEA GUARD FAVORED

Then, finally, Mr. Chairman, a word about the Senator's proposal for a sea guard. I favor the idea of such a force, though it might come under some new security system of the U.N. or administered by an international authority for the sea, instead of under the Security Council.

A definite cutoff place in the continental shelf is absolutely necessary. I leave it to the experts to decide the place, 200 or 600 meters. But certainly let us stop now from giving anyone the thought that there can be a great adventure to annex the bed of the sea.

I agree with several addresses that have been delivered at the United Nations General Assembly urging that the nations agree to a self-denial ordinance by which they would agree not to go farther in the sea than their present claims, until a rational order of the sea can be worked out.

SEA RESOURCES FOR UNDERDEVELOPED PEOPLES

And finally, as the President of the United States has said the deep seas and the oceans' bottoms must remain the legacy of all human beings. Listening to spokesmen of the developing peoples impresses one that in some way these people must be assured that they

may participate in the resources of the sea. Accompanying the licensing feature of which Senator Pell spoke, there should be a revenue plan which I hope he will incorporate in his treaty. The fees from the licensing feature might be used to strengthen the U.N., and particularly to be used in a development fund for the developing peoples. Indeed, that might be the only way in the beginning in which these people can participate and benefit from the exploration of the sea. The revenue might carry some of the expenses of the sea guard.

But I am also thinking for the moment of our own businessmen—the courageous people in this country that have the capacity and technique to develop the resources of the sea that are going to be so badly needed. They must not be denied. But certainly they would have a greater sense of security if their area of exploration were guaranteed under the licensing feature of the U.N., than under the anarchy with which they are now faced—anarchy that might call forth means of defense and probably conflict.

Mr. Chairman, the development of the world community is a tough and continuous process. In this you have played an important part, including your service as a delegate to the United Nations General Assembly. Outside of our present conflicts, which have to be resolved, for us to save seven-tenths of the earth's surface from a new colonial race and power struggle is about the most important thing to which we could devote ourselves. Senator Pell has produced "the paper."

Senator SPARKMAN. Thank you very much, Mr. Eichelberger. It is a very fine statement, as yours always are. I am going to let Senator Pell preside since I have a 12:30 appointment. We have one more witness. Can you stay on?

Senator PELL. Yes.

Senator SPARKMAN. I appreciate it. I regret very much not getting to hear Mr. Stephan. I would like to hear his testimony, but if I may be excused, I will leave it to you.

Senator PELL. Thank you very much, Mr. Chairman, for your patience and kindness.

OCEAN SPACE SOVEREIGNTY IN THE UNITED NATIONS

Am I correct in saying that one of the first proposals for the turning over of the sovereignty, giving the sovereignty of the ocean space to the United Nations, was done by Grenville Clark before he died, and his group in New Hampshire?

Mr. EICHELBERGER. Yes, I believe so. There have been quite a number of proposals. Mr. Clark was quite interested in the work of this organization.

Senator PELL. I wonder if it would not be appropriate, in view of Senator Clark's association, if we insert in the record at this point the proposal of Mr. Grenville Clark and anything you would care to put in at a later date in the record.

(The information referred to follows:)

EXCERPT FROM WORLD PEACE THROUGH WORLD LAW—TWO ALTERNATIVE PLANS

(By Grenville Clark and Louis B. Sohn, Harvard University Press, 1966, Cambridge, Mass.)

ARTICLE 81 OF THE PROPOSED REVISED CHARTER OF THE UNITED NATIONS

ARTICLE 81

The trusteeship agreement shall in each case include the terms under which the trust territory will be administered and designate the authority which will exercise the administration of the trust territory. Such authority, hereinafter called the administering authority, may be one or more states or the *Organization* itself.

The trusteeship agreement shall in each case include the terms under which the trust territory will be administered and designate the authority which will exercise the administration of the trust territory. Such authority, hereinafter called the administering authority, may be one or more states or the *United Nations* itself.

Comment. The only change proposed in this Article is from "Organization" to "United Nations" in the second sentence, consequential on the substitution throughout the revision of the term "United Nations" for "Organization".

It should be emphasized, however, that this Article may become of great importance. It would, for example, permit the direct administration by the "United Nations itself" of important straits and canals between seas and oceans which are now administered by particular nations. If the United Nations should in the future be designated as the administering authority for such passages and adjoining zones for the benefit of all nations, acceptable solutions might well be found for serious conflicts concerning these vital waterways. Similar arrangements might be made for the administration by the United Nations of the high seas and of certain important rivers, the waters of which are of vital concern to two or more nations.

This power to designate the United Nations itself as administering authority might also apply to the temporary administration of disputed areas pending their final assignment to or division between contending nations.

SEA GUARD ADMINISTRATON UNDER UNITED NATIONS

Senator PELL. There are a couple of points I wanted to ask you about. One is, I did not quite catch your comment on the sea guard. You thought it could be worked out or could not be worked out?

Mr. EICHELBERGER. I think it can be worked out.

Senator PELL. You had a reservation, though. What was it?

Mr. EICHELBERGER. I was simply using it as an illustration to say that of course as time goes on, you, yourself, would make some modifications and revisions of the treaty.

It could very well be that the question of a sea guard might come under the administration of the United Nations authority, which must be set up to direct the licensing machinery. It might not be, strictly speaking, a matter of the Security Council, but that is a problem for the future.

LICENSING FEATURE

Senator PELL. You said the licensing feature should be developed. I thought you said that licensing should not be given out to one nation, but that it should be given to several?

Mr. EICHELBERGER. No, I think you had covered it very well: if two nations apply for a license the authority should arbitrate the differences. There are various suggestions to implement the licensing feature that you suggested. Francis Christy, I don't know whether he is in the

room or not, of Resources for the Future, has developed ideas for implementation in quite some detail. He submitted a memorandum on it.

Senator PELL. Right, he is in the room, and we are going to include in the record a statement by him. He has done sterling work in this field.

(The statement referred to appears in the appendix.)

Mr. EICHELBERGER. What I meant was, Senator, that your licensing feature did not include the question of revenue from the licensing.

Senator PELL. Right, revenues.

Mr. EICHELBERGER. Which is very important to the underdeveloped people.

EXTENT OF U.N. SUPPORT FOR OCEAN SPACE TREATY

Senator PELL. Do you have any indication of general support for an ocean space treaty at the United Nations? I know you are in quite close contact with the different missions there.

Mr. EICHELBERGER. Well, Mr. Sisco, who is the head of the bureau of international organization affairs in the State Department, and so is in very close contact with the U.N., can tell you better than I can the views of all the states.

I have not heard many people speak of a treaty, except to anticipate that a treaty would grow out of resolutions and the work of a committee, just as they anticipated a treaty growing out of the committee that was set up for outer space in 1958. Many agree with your principles, and anticipate a treaty, but no one has been bold enough to say this is a treaty, let's consider it now. That is one of the reasons why what you have done is so important.

Senator PELL. I am so glad, incidentally, you mentioned the importance of the resources, because we haven't touched on that yet, and with the population explosion, the needs of the world to come, the number of people to be fed, it is obvious that the oceans will play a prime part here.

I would like to thank you, too, Mr. Eichelberger, for your very encouraging statements on this idea. I hope that your interest and enthusiasm in it will continue because as you gathered, there are those who are not in agreement that we should move ahead now in this direction, and we will need all the help we can get to develop thinking.

My purpose, really, is to move us ahead so that the American interests and the American thoughts will be those that will provide the skeleton and framework that will eventually be adopted by the United Nations.

Mr. EICHELBERGER. Senator, we did it in outer space, and I would like to see us do it in the sea.

Senator PELL. I thank you very much indeed for your support and for coming here. Thank you, Mr. Eichelberger.

Our last witness is Admiral Stephan. I guess today we will call him Mr. Stephan, since he is here in his capacity as vice president of the Ocean Systems, Inc., an affiliate of the Union Carbide Co.

Mr. Edward Stephan, you are very kind to come, because I realize you have had relatively short notice. I might say you have shown an adventurous spirit, because there are those of your colleagues in industry who have declined to come. I would like to see the National Oceanographic Association come up with a statement, from the viewpoint of industry, because I don't believe my proposals run counter to industry's. The licensing system will mean they get all the benefit of exploitation with very minimum, presumably, or small fees, and with no possibility of piracy, as raised by one of the witnesses earlier. It would be to industry's advantage, to have some law and order in this area, before it is like the Oklahoma land rush and the California gold rush. Thank you.

Would you proceed as you will, Mr. Stephan.

STATEMENT OF EDWARD C. STEPHAN, VICE PRESIDENT, OCEAN SYSTEMS, INC.

Mr. STEPHAN. Thank you, Mr. Chairman. My name is Edward C. Stephan. I am honored to appear before this committee in connection with Senator Pell's resolution. I have not been authorized in any way to speak for U.S. industry as a whole. As you have indicated, Mr. Chairman, I have not had the opportunity to study resolutions S. 172 and S. 186 carefully. I believe that ocean resources must soon play a major role in meeting the food and raw material needs of the world, particularly in view of the projected population explosion.

PARTICIPATION OF U.S. INDUSTRY

I believe U.S. industry should be a very important participant in the discovery and harvesting of ocean resources from both the ocean and the ocean floors. I am sure that U.S. industry's role will be heavily dependent on strong and reliable assurances of protection of the tremendous investments that must be made and that are being made by U.S. industry to explore for and recover ocean resources.

I believe that the good of the millions around the world, who will be looking to the sea for food and raw materials will be best served if national and international administration of ocean resources encourage U.S. industry to continue to commit vast funds that are necessary to make these ocean resources available to mankind.

As other witnesses have suggested, this is a complex subject. The President's Council, and more particularly the Commission on Ocean Resources, largely as a result of congressional interest in the matter, are currently studying the problems of the national oceanographic effort. This study should shed much light on desirable international arrangements.

I hope that the Congress will withhold action on this matter until they have the benefit of the report of the President's Commission on Ocean Resources. I hope also that the Congress, under your leadership, Senator, will continue to indicate its concern with this problem and stimulate the most rapid effective action of the study groups, so that you soon will have the benefit of their detailed study.

Thank you, Mr. Chairman. I appreciate the privilege of expressing my views.

NATIONAL PROBLEMS IN OCEAN DEVELOPMENT

Senator PELL. Thank you, Mr. Stephan. As I understand it, the President's Commission does not have within its terms of reference, the international aspects of an ocean space treaty as much as the way the American effort in ocean development, oceanology should be met. Therefore I don't think too much reliance should be placed on this particular group, as fine as they are, because this is not within their prime area of emphasis. In fact, it would be perhaps a tertiary one.

Mr. STEPHAN. Senator, I think that it is very helpful in approaching an international problem to have studied the national problem and know what your position is. I believe that while I agree that their responsibility is primarily in the national area, I think we will be far better prepared to develop an international view after we have clarified the national problems. This whole area involves the relation not only with the Federal Government, but industry and the States, and I think that when you have that national view, you are better prepared to approach the international problems.

Senator PELL. Would you agree that it is important that we have the correct legal framework in which industrial activity in ocean space can safely take place?

Mr. STEPHAN. Yes.

Senator PELL. In your view then it is a desirable end, but not an immediate goal?

Mr. STEPHAN. I think my view is that it is indeed a desirable end, but that we should have the benefit of people who are doing I think a fine job, they are working very hard on this problem, to develop a national view which can be fitted into the international picture.

DURATION OF LICENSE RELATED TO INVESTMENT

Senator PELL. I agree with you that some way must be found that companies do not invest and lose their investment when they exploit ocean space. In this connection, perhaps my idea of a 10-year license will be too short, and the duration of the license should be related to the amount of the investment. Does that make sense to you?

Mr. STEPHAN. That is certainly a consideration. I very frankly haven't had a chance to analyze it. The investments are enormous, and certainly there must be reliable and adequate protection of the investment, or it just won't be made, and the people won't get the resources.

Senator PELL. Right. I think you have put your finger on one of the weaknesses in my proposal, that the limit, the finite limit should be directly related to the potential investment. I am sure that words can be found to work this out.

PRACTICALITY OF A U.N.-OPERATED SEA GUARD

Do you think that a U.N.-operated sea guard is impractical? What is your view now, not speaking in your old role as a Navy man, but in your new role as a man in industry?

Mr. STEPHAN. Strictly from a personal point of view, I am afraid I think it is impractical.

Senator PELL. Do you have any alternative to enforcement? We agree that a legal framework is necessary. The question is one of time, when we do it. What arrangement would you suggest for providing the legal means of enforcement in ocean space?

Mr. STEPHAN. I don't believe I am capable of making a response to that, Senator.

Senator PELL. But in your view, the sea guard is as good as any other idea or as bad as any other idea, but there is no other alternative solution that seems better to you at this time?

Mr. STEPHAN. I don't know that I entirely agree with that. I am skeptical of the sea guard; I am afraid of the sea guard, very skeptical.

LIMIT OF CONTINENTAL SHELF

Senator PELL. Does the 600 meter shelf limit seem to you to be a pretty good arbitrary figure, or do you think we ought to stick to 200 meters?

Mr. STEPHAN. 600 meters is 1,950 feet, approximately. I believe, and I may be wrong, that that would cover almost 100 percent of the continental shelf as they are thought to exist.

Senator PELL. Excuse me, I think it covers every continental shelf without exception, as I understand it.

Mr. STEPHAN. Well, that may be. I am thinking of an area off the coast of California, where between the California coast and the offshore islands it gets quite deep.

Senator PELL. I understand there are different views on this. I thank you very much.

There is another rollcall vote going on. This concludes this hearing.

I thank the witnesses for their courtesy in coming. The hearings will remain open for two weeks for the submission of statements.

I will particularly welcome statements from industry, as to whether they think they can live with this licensing arrangement; whether they think it is to their advantage or disadvantage to have some form soon of a legal framework of this sort. The record in this hearing will be closed in two weeks.

The committee is adjourned.

(Thereupon, at 12:40 p.m. the hearing was adjourned.)

APPENDIX

THE AMERICAN LEGION,
LEGISLATIVE COMMISSION,
Washington, D.C., November 27, 1967.

Hon. J. WILLIAM FULBRIGHT,
Chairman, Senate Committee on Foreign Relations,
Washington, D.C.

DEAR CHAIRMAN FULBRIGHT: We note your announcement that the Senate Committee on Foreign Relations has scheduled a public hearing on two resolutions, S. Res. 172 and S.J. Res. 111, dealing with jurisdiction over the ocean floor.

I am enclosing copies of two resolutions which The American Legion has adopted relative to this issue. These are No. 414, approved by our 1965 National Convention, and No. 22, approved by our National Executive Committee this past October. It is the sense of both that The American Legion is opposed to giving the United Nations jurisdiction and control over any significant sources of independent revenue, including the resources of the ocean floor. The bases for this position are set forth in the preamble to Res. No. 414.

I would greatly appreciate your making this letter and the enclosures a part of the official records of the hearings of your Committee.

Sincerely yours,

HERALD E. STRINGER, *Director.*

FORTY-SEVENTH ANNUAL NATIONAL CONVENTION OF THE AMERICAN LEGION
PORTLAND, OREGON; AUGUST 24–26, 1965

RESOLUTION NO. 414

Committee: Foreign Relations.
Subject: United Nations Independent Revenue Opposed.

Whereas there have been advanced various proposals for raising direct revenue for the United Nations, with a view to making that organization financially independent; and

Whereas these include suggestions that the UN be authorized to charge member states for services, to tax individual citizens of member states, to place levies on certain international activities (e.g., mail, shipping, travel), and to exploit natural resources not belonging to any country or resources the claim to which is or might be relinquished by the country or countries concerned (e.g., those of Antarctica, the sea-beds, and outer space); and

Whereas some have advocated that the UN issue a declaration of United Nations title to any petroleum deposits in the Gulf of Mexico beyond U.S. and Mexican territorial limits; and

Whereas under international convention, any such deposits which are technically accessible would be a part of the natural resources of the American continental shelf and belong, therefore, to either the U.S. or Mexico; and

Whereas the United Nations Charter specifies (Article 17, paragraph 2) that: "The expenses of the Organization shall be borne by the Members;" and

Whereas to modify this fundamental principle along the lines of the above mentioned proposals would be a step in the direction of converting the UN into a superstate or "world government;" and

Whereas a financially independent international organization might tend to become less and less responsive to the needs and aspirations of its members, and might be tempted to undertake activities quite unrelated to its basic purposes and perhaps inimical to the best interests of some or all of the nations it is intended to serve: Now, therefore, be it

Resolved, by The American Legion in National Convention assembled in Portland, Oregon, August 24–26, 1965, That The American Legion opposes 1) the giving to the United Nations title to or revenue from any income producing property, regardless of location but especially the off-shore oil deposits in the Gulf of Mexico; and 2) the authorizing of the United Nations to tax individual citizens of any nation, to place levies upon any member state for whatever services, to issue income-raising stamps, or to charge anyone or any member state fees of any nature for any form of international activity.

NATIONAL EXECUTIVE COMMITTEE OF THE AMERICAN LEGION MEETING OF OCTOBER 18–19, 1967, INDIANAPOLIS, INDIANA

RESOLUTION NO. 22

Commission: Foreign Relations.
Subject: Oppose Vesting Title to Ocean Floor in United Nations.

Whereas Resolution No. 414, adopted at the Portland National Convention (August 24–26, 1965), expressed the opposition of The American Legion to the giving to the United Nations any source of independent revenue, including the resources of the seabed or ocean floor; and

Whereas Malta, A UN member, has proposed to the current session of the General Assembly that jurisdiction and control of the ocean floor, and the financial benefits derived from its exploitation, be placed in the United Nations; and

Whereas stories have been circulated to the effect that the United States representatives will support such plan; and

Whereas several members of the House of Representatives have introduced joint resolutions in opposition to vesting title to the ocean floor in the UN; and

Whereas H.J. Res. 816 and similar bills would also memorialize the President of the United States to instruct our UN representatives to oppose any action at this time to vest control in the UN of the resources of the deep sea beyond the Continental Shelves of the United States; and

Whereas hearings are now underway on these measures before the House Subcommittee on International Organizations and Movements: Now, therefore, be it

Resolved, by the National Executive Committee of The American Legion in regular meeting assembled in Indianapolis, Indiana, on October 18–19, 1967, That the American Legion reaffirms its position of opposition to the giving to the United Nations any properties or resources which would provide it with independent revenue; and be it further

Resolved, That the American Legion shall support the enactment of legislation to express it to be the sense of the Congress that United States representatives to the United Nations should be instructed to take all steps possible to block any and all moves to place jurisdiction and control of the ocean floor in the United Nations.

TESTIMONY BEFORE THE SENATE FOREIGN AFFAIRS COMMITTEE BY FRANCIS T. CHRISTY, JR.*

An economic approach to man's growing interest in the mineral raw materials of the deep ocean floor may be of value to the current debate on who controls what—not with the idea that economic rationality will prevail, but with the suggestion that economic rationality is one goal by which alternative regimes can be evaluated.

Several alternative regimes for governing mineral exploitation have been suggested. These include the division of the beds of the seas among the coastal nations;[1] the "flag nation" approach, under which nations guarantee claims made by their entrepreneurs;[2] the establishment of an "international registry

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[1] Seymour S. Bernfeld, "Developing the Resources of the Sea—Security of Investment", *The International Lawyer,* 67–76 (1967).

[2] Northcutt Ely, "American Policy Options in the Development of Undersea Mineral Resources," *supra,* pp. 000–000.

office";[3] and the establishment of an international agency with the authority to grant leases and extract rents.[4] While these are cast as distinct alternatives for the purposes of illustration, there is a wide range of solutions involving elements and combinations of each of the above to a greater or lesser degree.

The range of solutions should be emphasized because of the tendency of the current debate to polarize between those advocating UN control and those fearing UN takeover. The advocates point out the need of the UN for an independent income. The opponents point to the weakness of the UN and its inability to deal with difficult issues of practical import. And more than a little emotion is generated on both sides. I would like to suggest, however, that the UN is irrelevant. It exists, and it might well be used. But if it did not exist, we would still be faced by the problems of providing rules or a regime to govern the exploitation of the deep sea minerals.

Much of the current debate also tends to oversimplify the questions of urgency and knowledge. "Some of us believe that the American objective, for the next several years, should be to keep all options open, and avoid premature commitments. Too little is known about these resources or the means of exploiting them, to justify great decisions."[5] This is plausible, but inexact. Certainly our knowledge was not particularly great when Truman proclaimed in 1945 that the resources of the subsoil and seabed of the continental shelf contiguous to the United States were subject to its jurisdiction and control. The relevant question is one of the *degree* of knowledge with respect to the *kind* of decision. We may not know enough to write detailed laws and regulations, but it can be argued that we do know enough to seek the establishment of certain principles, such as security of investment, and that we know enough to avoid steps that may be detrimental to our long run interests. For example, a good case can be made, on the basis of present knowledge, for getting "rid of the exploitability concept, the rubber boundary notion, altogether."[6] And I think that a good case can be made for avoiding the conditions that plague international fisheries, where the "rule of capture" has led to gross physical and economic wastes.[7]

THE MINERALS OF THE DEEP OCEAN FLOOR

The two problems posed by the potential exploitations of minerals are the extent of the limits of the coastal state's rights and the regime that will govern exploitation beyond those limits. In the first case, the rights are presently limited by the criterion of exploitability and by some ill-defined concept of propinquity.[8] The exploitability criterion, as already indicated, provides a

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[3] L. F. E. Goldie, "The Geneva Conventions", in Lewis M. Alexander, ed., *The Law of the Sea* (Columbus, Ohio: The Ohio State University Press, 1967), pp. 273–293.

[4] Francis T. Christy, Jr., "Alternative Regimes for Minerals of the Sea Floor," a paper presented at the American Bar Asssociation National Institute on Marine Resources, Long Beach, California, June 8, 1967.

[5] Ely, *op. cit.*, p. 000. It might be noted that the Soviet motion placed before the International Oceanographic Council and referred to by Ely, has now been discussed by that body. As a result of that discussion, the IOC voted to concentrate on the conduct of scientific research and not on the exploitation of deep sea minerals. This particular motion, therefore, does not add to the urgency of reaching a solution. More recently, the Maltese delegation to the UN introduced a *note verbale* dealing explicitly with the use and exploitation of the resources of the sea floor (UN General Assembly, 22nd Session, A/6695, 18 August 1967). The *note* which originally called for a treaty has been amended to call for the establishment of a study group. There is, thus, urgency for study and research, if not for decision.

[6] Ely, *op. cit.*, p. 000. The rubber boundary may soon be stretched. "More recently, the Department (of the Interior) has indicated an assertion of jurisdiction beyond the 200 meter line by publishing leasing maps for areas off the Southern California coast as far as 100 miles from the mainland, at depths as great as 6,000 feet. Additionally, oil and gas leases have been issued in an area 30 miles off the Oregon coast in water as deep as 1,500 feet." Frank J. Barry, Solicitor, Department of the Interior, "Administration of Laws for the Exploitation of Offshore Minerals in the United States and Abroad," a paper presented at the American Bar Association National Institute on Marine Resources, Long Beach, California, June 9, 1967.

[7] See Christy, "The Distribution of the Seas' Wealth in Fisheries," in Lewis M. Alexander ed., *The Law of the Sea* (Columbus, Ohio: The Ohio State University Press, 1967), pp. 106–21.

[8] See N. 6, supra. It has been argued that it was not the intention of the Convention to limit the extension of exclusive rights by some concept of propinquity. "The objective of the Convention on the Continental Shelf was to divide the beds of the seas among the coastal nations for that was the real need if future conflicts were to be avoided." Bernfeld, *op. cit.*, p. 72. Griffin, to the contrary, states that "the literal open-endedness of the Convention's exploitability test has caused erroneous assertions that it allocates the sea bottom underlying entire oceans." William L. Griffin, "The Emerging Law of Ocean Space," 1. *The International Lawyer*, p. 573, Griffin further states that "propinquity is the basis for allocating to the coastal states sovereign rights in the seabed and subsoil of internal waters, territorial sea, and the continental shelf. The juridical shelf terminates where propinquity terminates." ibid., p. 585.

rubber boundary that may soon be stretched by the technological ability to exploit oil resources in waters deeper than 200 meters. Attempts, therefore, to arrive at narrowly restrictive limits are not likely to be popular. If we choose not to go all the way to the mid-points of the oceans, some line will have to be worked out that will reflect the genuine interests of the coastal state in its adjacent regions. Some of the difficulties of the rubber boundary and some alternative solutions have been expressed very effectively by Ely and need not be repeated here.[9]

The second problem—that of alternative regimes beyond the limits of the coastal state (however those limits are defined)—arises because of the possibility of commercial exploitation of oil resources from deep water salt domes and of the manganese nodules lying on the floor of the sea in waters 3000 or more feet in depth. The nodules—high in content of manganese, copper, nickel and cobalt—have been known since the voyage of the *Challenger*. Until recently, they were viewed as scientific oddities rather than as potential natural resources. Now there are glowing accounts of the vastness of the deposits of these materials and of the great wealth contained therein. While St. Elmo's fire, rather than economic reality, may be responsible for much of the present glow, it is clear that these resources will eventually become of significant value to man.[10]

For our purposes, five points about the possible exploitation of the manganese nodules are significant.[11]

1. Commercial attempts to exploit the minerals in deep waters may occur within the next five or ten years. This is admittedly a rough guess since most potential exploiters are notably cautious in revealing their intentions.

2. The capital costs are likely to approximate $100 million and technological requirements are likely to be high. These factors, together with high risks, will limit the number of participants in the near future.

3. For exploitation to provide a satisfactory return on investment, the area under control of the exploiter will probably have to be large, at the least, 1000 square miles.[12] Other estimates run up to a circle whose radius is 100 miles—an area of more than 30,000 square miles.

4. There will be considerable variation in the value of particular sites, because of wide differences in the density of the nodules on the floor, the metallic content of the nodules, the depth of water in which they lie, the topography of the floor, etc. The range in value is likely to be as great as that for mineral sites on land.

5. The estimated reasonable scale of production of a single enterprise will be extremely large. Brooks has estimated that the amount of manganese thrown on the market by a single producer might be so great the price would drop from 90¢ per unit (1963 price) to 50¢.[13] The cobalt price might drop from $1.50 per pound to $1.00; and nickel from 70¢ to 65¢ a pound. Two or three producers, of course, would have even greater effect. Clearly, exploitation will require considerable

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[9] Ely, *op. cit., supra*, N. 2, pp. 000–000.

[10] "On the assumption that an [international] agency would be created in the year 1970, that technology will continue to advance, that exploitation will be commensurate with the presently known resources of the ocean floor, that exploration rights and leases will be granted at rates comparable to those existing at present under national jurisdiction and that the continental shelf under national jurisdiction will be defined approximately at the 200 meters isobath or at 12 miles from the nearest coast, we believe that by 1975, that is, 5 years after an agency is established, gross annual income will reach a level which we conservatively estimate at around $6 billion." Pardo, "Agenda Item 92, Examination of the Question of the Reservation Exclusively for Peaceful Purposes of the Sea-Bed and the Ocean Floor, and the Sub-Soil Thereof, Underlying the High Seas Beyond the Limits of Present National Jurisdiction and the Use of Their Resources in the Interests of Mankind (A/6695, A/C.1/952)", A/C.1/PV.1516, p. 4. Pardo's figure of $6 billion does not appear realistic, even with the acceptance of his assumptions. Oil is not now exploited on the U.S. shelf in waters greater than 300 feet in depth. It is not likely that oil exploitation in waters below 660 feet (200 meters) will be as significant as that implied by Pardo, for many years to come. Furthermore, the assumption that the limits of a coastal state's rights will be at the 200 meter isobath is, I think, unrealistic. Royalty incomes from oil beyond the continental slope and from manganese nodules on the sea floor are not likely to be significant within the next decade or two.

[11] The most comprehensive discussion of the technology of the exploitation of manganese nodules is in John Mero, *The Mineral Resources of the Sea* (New York: Elsevier Publishing Company, 1965.) For economic analysis see David B. Brooks, *Low-Grade and Nonconventional Sources of Manganese* (Washington, D.C.: Resources for the Future, Inc., distributed by the Johns Hopkins Press, 1966), pp. 93–108, and Brooks, "Deep Sea Manganese Nodules," a paper presented at the 1967 Law of the Sea Institute Conference, University of Rhode Island, Kingston.

[12] Christy, "Alternative Regimes . . .", *op. cit.*, p. 4.

[13] Brooks, *Low-Grade and Nonconventional Sources of Manganese*, op. cit., p. 105.

adjustments in the short run—both by the users of the minerals and the producers of the alternative sources of supply. There will also be difficulties in arriving at a rate of development that is not self-destructive to the exploiters themselves.

The short-run situation will be limited to a relatively few exploiters who will have difficulty in controlling the rate of output with respect to the market for their products. Competition for exclusive rights to particular sites is likely to be severe because of the large size of holding and great variety in value.

THE CRITERIA FOR RULES

Three criteria are suggested for evaluating alternative rules for governing the exploitation of the sea floor minerals—economic efficiency in production; nonarbitrary allocation of exclusive rights; and acceptability. These criteria overlap and are, to an extent, interdependent.

1. *Economic efficiency* in production will require, first of all, the ability of the entrepreneur to acquire security of investment. He must be able to obtain exclusive rights to a sufficiently large area for a sufficient length of time in order to capture a fair return on his investment. While it is conceivable that an entrepreneur could undertake such an investment and operate it effectively in the absence of rules guaranteeing tenure of rights, most writers believe that the risk would be too high to do so. Therefore, the search is for the regime or jurisdiction that can provide the best protection to the entrepreneur.

Economic efficiency may also call for a set of rules that would control the rate of output. In a free-enterprise economy, the market generally serves this function and is preferable to an oligopoly. But in this situation, the magnitude of output is so great that some form of control may be desirable in the short run. At the least, the rules should avoid creating incentives that would stimulate marginal producers to enter the industry.

In addition, social costs and benefits should be considered within the criterion of economic efficiency. Society should receive some return from the exploiters to cover the costs of protecting and administering exclusive rights. External costs, such as pollution, should be avoided, or paid for by the exploiter. It would be desirable to avoid "high-grading" of manganese nodules. This might occur if there were little or no incentive for the exploiter to sweep the nodules from the floor in an efficient pattern, thereby making ultimate recovery of the nodules more difficult and costly.[14] Society would also want to reduce, insofar as possible, incentives that would lead to the inefficient allocation of capital and labor resources.[15]

2. *The non-arbitrary allocation of exclusive rights* may not be relevant to the pioneer exploitation effort, and may seem to be of little importance in the short run, but over the long run, there must be some system for making rational choices among competing claimants.

Property (in this case, an exclusive right to exploit a given area) can be allocated by a number of means—by force or power; by some concept of national or international interest; on a first come, first served basis; or through the market place. Any system can make use of several of these, but it is desirable to reduce, insofar as possible, the degree of arbitrariness.

Most people would abjure the use of power or force in the allocation of exclusive rights to the minerals of the sea floor. But the more arbitrary the means for allocation, the more chance there is that power will become important. Initially, allocation by power may work to the advantage of the big nations, but if decisions are made in some international arena the advantage may lie with the less-developed nations.

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[14] The "rule of capture" that prevailed for the exploitation of oil in the early 1900's stimulated excessively rapid rates of output that wasted natural pressure and increased the costs of recovery.

[15] In fisheries, the principle of the freedom of the seas has led to great inefficiencies in the allocation of capital and labor. Since the property is common to all and there are no controls on the number of producers, any shareable profit (or economic rent) becomes dissipated. The industry tends to operate where total costs and revenues are equal rather than where marginal costs and revenues are equal. For example, it has been found in the Georges Bank haddock fishery, that 25% fewer vessels would produce the same catch and 50% fewer vessels would produce the maximum net economic revenue. See Christy, "The Distribution of the Seas' Wealth in Fisheries", *op. cit.* Since minerals are not fugitive but geographically fixed, the same dissipation of economic rent is not likely to occur (although it could in the absence of controls). However, misallocation of capital and labor can occur if the exploiters do not pay a fair price for their rights, and are thereby given an advantage over the developers of land minerals.

Decision on the basis of some concept of public interest is another possibility. In part, this technique is used for the allocation of radio frequencies in the United States where the decision is influenced by the promises for socially valuable programming. For the resources of the sea floor beyond national boundaries, the public interest might be expressed in terms of the need for income, the desirability of regional growth, the spreading of technology, or the closing of the gap between the "haves" and the "have-nots.." While all of these are desirable humanitarian goals, they can probably be achieved more effectively through more direct means than by the allocation of exploitation rights.[16]

The third technique is that which was adopted in the opening of the western United States, when prospecting was done by individuals with rudimentary equipment. Under this system, exclusive rights are acquired by the first to stake the claim. The government registers and guarantees the claim and may require some degree of performance by the exploiter in order for him to maintain his claim. Once claims are established, they can be bought and sold and, thereby, reallocated by the market.

The use of this technique to allocate rights to the minerals of the sea floor would be accompanied by many difficulties both in the initial stages of development and over the long run. In order to prevent a headlong race to acquire rights to vast areas of the sea floor, some form of international authority and some international rules would have to be established. This is discussed in more detail later in reference to the flag nation alternative. The major difficulty, in terms of efficient allocation of rights, is that this technique provides no method for choosing among claimants for the same or overlapping areas. In view of the size of areas required and the wide range in values of areas, such conflicts are likely to occur relatively soon after development gets started.

"If expeditions from too many nations cluster too close to the honey pot, the resulting disputes, initially at least, are going to be settled by accommodation among the competing states, or by the evolution of adversary case. law." [17] Thus, where competition occurs, this technique would resort to allocation by power or by some concept of public interest or equity, "initially at least". It is not clear from Ely's paper, what would evolve beyond that—what would happen in the long run.

The fourth technique for allocation would be to set up a market for the exclusive rights. This is the technique used by the United States for the oil resources of the continental shelf. Individual firms and groups of firms bid among themselves for exclusive rights to resource areas, and the bids reflect (albeit roughly) the value of those rights.

For such a market to be established for the minerals of the sea floor beyond the edge of the continental shelf (however defined), there would have to be a greater degree of international authority and international rule than for any of the other allocating techniques. However, in principles, the market would be the most efficient and least arbitrary method for the allocation of exclusive rights. Those firms capable of the most efficient exploitation should be able to outbid the less efficient exploiters. To be sure, any such market is likely to be constrained by non-market factors which may tend to reduce the efficiency of allocation. Some of these constraints may be desirable (e.g. the avoidance of pollution) and some may be inevitable (recognizing that man is not necessarily an economically rational animal). But even with these constraints, allocation by market would be less arbitrary than by any of the other techniques. It is suggested, therefore, that the best means for meeting the criterion of non-arbitrary allocation of exclusive rights is through a market similar to that for the oil resources on the U.S. continental shelf.

3. *Acceptability* as a separate criterion may seem unnecessary and redundant, since tenure of exclusive rights is so clearly dependent upon rules that will not be violated. But some alternatives have been suggested that are so obviously unacceptable that it seems worthwhile to emphasize that other nations will have an influence on the formulation of rules.[18] In addition, the criterion of acceptability

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[16] It should be emphasized that this refers *only* to the allocation of rights to exploit, *not* to the distribution of revenues obtained from these rights.

[17] Ely, op. cit., p. 000.

[18] The recognition of non-United States influence on rules is simply a reflection of reality. It does not imply that the resources of the sea floor are *res communes* and not *res nullius*. The distinction between these two points of view provides the basis for some absorbing legal arguments, but these arguments are not likely to have much influence on the decisions.

brings into the discussion important non-economic factors such as national security. Unfortunately, at the moment, one can only speculate as to how other nations (and the U.S. Department of Defense) view their interests in the sea floor.

THE ALTERNATIVES

Four alternative regimes have been suggested for meeting the problems raised by the potential development of minerals of the sea floor. While these might be cast as quite separate and distinct regimes, the distinctions are not clear for all elements of each regime. A flag nation approach, for example, would probably require some degree of international authority; and an international authority might permit coastal states to exercise some rights in waters that are closer to them than to all other states. Nevertheless, the distinctions are useful to maintain for the purposes of discussion and for examining their relevance to the criteria and principles suggested above.

A. *The Division of the Sea Floor.*—One alternative is to divide up the sea floor so that none of it remains outside the jurisdiction of some coastal state. Jurisdiction, in this case, would cover only the rights of mineral exploitation. One approach would follow the guides laid down in Article VI of the Geneva Convention on the Continental Shelf—that is, where median lines cannot be arrived at by negotiation, the lines will be drawn so that every point is equal in distance to the nearest points of opposite or adjacent coastal states.[19] Another approach has been suggested by Bernfeld—"provide that the beds of all of the Great Seas shall be deemed divided by a median line through the longest dimension of each, and then run each coastal nation's rights to the seabed to that median between the lines of latitude and longitude, as the case might be, from the nation's coastal extremities."[20] While such schemes might meet the first two criteria, by providing for efficient production and allocation of the resources, it is most unlikely that they would be acceptable.

As Bernfeld points out, islands would provide vexing problems. If islands are given full rights (in keeping with the Geneva Convention), such tiny desolate rocks as Clipperton Island would give the French a vast territory in the eastern tropical Pacific, and the U.K. would acquire half the South Atlantic because of Ascension, St. Helena, and Tristan da Cunha. If rights are limited only to those islands that are sovereign states, the U.S. might be able to leap over Bermuda and the Bahamas, but would have to give up areas accruing to Hawaii and the Aleutians. Furthermore, such a principle would tend to increase the already great proliferation of mini-states since they might acquire vast territory by doing so.[21]

Aside from the problem of islands, the division of the sea floor is not likely to appeal to the United States Navy. Although the division might be limited to exploitation rights, there is the possibility that the rights might become extended to cover more than exploitation and so as to affect the use of the superjacent waters. To the extent that this becomes true, it would impede the mobility of naval craft.

But the major reason for the unacceptability of this approach is that it would do little or nothing for those nations that have little or no toe-hold on the oceans. In particular, it is most unlikely that the Soviet Union would find any such division to its advantage. While some may find merit in such a solution, it is unrealistic to think that any solution would be viable in the absence of Soviet acquiescence.

B. *The Flag Nation Approach.*—This would treat the "mineral resources which are beyond the limits of the coastal state's exclusive seabed jurisdiction (howsoever those limits are defined) as open to appropriation and exploitation under the laws of the flag of the discovering nation."[22] In an earlier paper, Ely stated that "as a practical matter, the explorer thereby appropriates a segment of the seabed, and the jurisdiction—let us go further and say sovereignty—of his flag attaches to the discovery . . . There is no argument about the geographical extent

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[19] An illustration of this will be available in the forthcoming proceedings of the Second Annual Conference of the Law of the Sea Institute held at the University of Rhode Island, Kingston, June 26–29, 1967. The map was prepared by the author and Henry Herfindahl as an illustration of the difficulties and unexpected results that might occur by such a division.

[20] Bernfeld, *op. cit.*, p. 73.

[21] Islands already provide difficulties, as manifested by the current dispute between France and Canada over rights to resources on the Grand Banks. The French islands of St. Pierre and Miquelon are so located that a strict interpretation of the Geneva Convention gives them a large area of the Grand Banks.

[22] Ely, *op. cit.*, p. 000.

of the appropriative right unless and until a neighbor sets up operations close enough to create friction." [23]

This system assumes that the prevailing jurisdiction that a nation has over one of its vessels can be extended down the dredge line and through the dredge to cover an unspecified area of the floor of the sea (or in the case of oil, down the drill, through the floor of the sea, and into the pool of oil). Since the connection between jurisdiction over a vessel and jurisdiction over the sea floor is tenuous at best, this system would presumably require some affirmative declaration on the part of the flag nation; i.e., a declaration that would assure the entrepreneur that he would be protected in exploiting a sufficiently large area for a sufficient length of time to get an adequate return on his investment.

I will leave to the lawyers the several interesting questions of law that are raised by this approach. Instead, I will examine one of the fundamental assumptions (that is questionable from an economic point of view) and discuss the alternative in the light of the criteria suggested above.

Ely states that "there is plenty of room on the world's deep seabeds." Hugo Grotius advanced the principle of the freedom of the seas, in part, because of the apparent inexhaustibility of the resources. And McDougal and Burke have stated that the resources of the sea are so vast that they can be shared by all to the detriment of none.[24] If this is true, then the resources are free goods (like the air we breathe) ; there is no incentive or need for the acquistion of exclusive rights; and the property has no price. This condition has certainly not proven correct for marine fisheries. Indeed, the principles of the freedom of the seas is the primary cause for the gross physical and economic waste that has accompanied the exploitation of fisheries.[25]

For the condition to exist for the minerals of the deep sea there would have to be uniformity of value for resources sites over vast areas. That is, there would be no significant variation in the costs of obtaining and extracting the desirable minerals no matter where they occurred. This is highly questionable. As indicated above, the range in value for the different areas in which manganese nodules occur is probably as great as the range in value on land. This, plus the large size of area that an enterprise would want to hold, will inevitably lead to competition for the high valued sites. In short, there is not plenty of (economic) room; the resource sites will have a price; and exclusive rights, clear in extent and tenure, will be necessary.

But the difference of opinion is not so much about the inevitability of the results as it is about the timing. The "plenty of room" approach assumes that there will be plenty of time to work out rational administrative and management schemes in the future. The danger of this approach (even if it is not challenged by other nations) is that the assumption may be incorrect, and that our actions will have established principles and set patterns that will be difficult to change and that may be detrimental to our interests.

With respect to the criteria, this approach provides no clear cut guarantee of exclusive rights, either in extent or tenure. Many entrepreneurs may be unwilling to bear the risks that would be associated with this lack of clarity.

The approach provides no means for non-arbitrary allocation of exclusive rights. To settle disputes "by accommodation among the competing states" is to leave the entrepreneur to the mercy of diplomats who are subject to all sorts of pressures; not just those of protecting the interests of the entrepreneur.

The acceptability of such an alternative is doubtful. Assuming that a nation is willing to declare that it has jurisdiction—or sovereignty—over a segment of the sea floor that is being exploited by one of its nationals, how would other nations react? If they ignore the implicit provision that jurisdiction can only be acquired through actual exploitation, the race would be on to assert claims to vast areas of the sea floor. If that provision is accepted, then nations not antic-

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[23] Ely, "The Laws Governing Exploitation of the Minerals Beneath the Sea," a paper presented before the New York Section of the American Institute of Mining, Metallurgical and Petroleum Engineers, New York, January 13, 1966.

[24] McDougal and Burke, *The Public Order of the Oceans* (New Haven: Yale University Press, 1962), pp. vii–viii.

[25] See n. 15 *supra*. The long list of depleted stocks of fish continues to grow. It includes the whales of the Antarctic; tuna of the eastern Pacific and now of the Atlantic; salmon throughout the world; cod and haddock of the Grand Banks; halibut off Northwest America; herring of the North Sea; shad; sturgeon; and a host of other stocks of fish. Depletion has been controlled in some cases by forcing the adoption of inefficient fishing techniques, thereby worsening the already wasteful applications of capital and labor. These consequences will continue to worsen until some form of property right (perhaps through controls on the number of producers) is established.

ipating exploitation would have nothing to gain by this approach. Since not more than a handful of nations are likely to have bonafide interests in exploitation, the opposition to the flag nation approach would indeed be heavy.

C. *An International Registry Office.*—Certain modifications of the flag nation approach have been suggested as ways of avoiding some of the above difficulties. One of these is the establishment of an international registry office and the other would add to this, a provision for the distribution of a share of the revenue to the UN.

Both of these suggestions call for some form of international agreement and might be considered as falling somewhere between the flag nation approach and that of an international authority.

L.F.E. Goldie has stated that "the main policy goals of secure title, limited access to a resource to insure that prevention of over-capitalization, overproduction and congestion, and the avoidance of 'first come first served' tactics and tho ensuing conflicts, could be gained if regional agencies (with, necessarily, a central index in the United Nations Secretariat) could be established to carry out *evidentiary* (notice) and *recording* functions." [26] Like the flag-nation approach, the initiative would lie with the entrepreneur. He would record his claim with his country, and his country would the record its international claim to exercise jurisdiction and control over the individual's (or enterprise's) activity with the (recording) agency." [27] The agency "would have power to issue instruments defining the recording state's Zone of Special Jurisdiction." The zone of jurisdiction would be limited with respect to purpose, duration, area, and time in which to prove development.

An effective regime of this sort would provide more security of title than a flag nation regime. Over-capitalization and congestion, as a consequence of common property (as in fisheries) would automatically be avoided by the establishment of the exclusive rights.[28] However, it is difficult to see how this regime would operate on anything but a "first come, first served" basis, and it would tend to stimulate overproduction rather than avoid it.

That the exclusive rights would go to the first entrepreneur to record them, is not, of itself, necessarily undesirable. However, as pointed out in the discussion of criteria, this technique provides no means for resolving conflict when two or more entrepreneurs are in competition for the same or overlapping zones. And such conflicts are likely to become common, particularly in view of the magnitude of the area that an entrepreneur would require and the (presumed) scarcity of valuable sites. Furthermore, assuming the claims are non-transferable, the first to record would not necessarily be the most efficient producer. In the Cherokee Strip, the rewards went to owners of the fastest horses, not the best farmers. The losers are not only those that might be best equipped to exploit the resources, but also society in that less productive units of capital and labor may be employed. If the claims are transferable, and the claim holder can market his rights, then the race is on. An entrepreneur has little to lose by recording a claim, and may make a lucky strike.

In addition, the performance requirement ("use it or lose it") would tend to stimulate excessively rapid rates of output. Those who had recorded claims would have the incentive to produce even though net returns were inadequate or negative, since they might lose the claim by not producing. All of these (and other) difficulties reflect the fact that the property (the exclusive right) may be acquired at a cost that does not approximate its value to the holder—that there is no market by which the value of the property can be expressed and which can be used as a method for allocating capital and labor. While the thought of these inefficiencies may be painful only to an economist, the results of non-market allocation of rights may be painful to all.

In terms of the acceptability of such a regime, the same questions might be asked that were asked of the flag nation alternative. In order to get around this, it has been suggested that a certain portion of the revenues of production be devoted to some international purpose. The revenue could be acquired by license fee, income tax, yield tax, or royalty. This presumes, of course, that there is some form of international authority that has the ability to extract revenues. It goes beyond Goldie's recording agency (that would apply only to the signatories of his proposed convention) and would apply to all exploitation beyond the limits of the coastal states. The collection agency might be the United Nations, some

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[26] Goldie, *op. cit.*, p. 280. Emphasis in original.
[27] *Ibid.*, p. 281.
[28] This would not be true for oil, if the rights did not fully cover the pool.

agency of the United Nations, or, conceivably, some special purpose agency outside the aegis of the United Nations. The purpose of the acquisition and distribution of the revenues would be to make the regime acceptable; to buy out the interests of nations in order to prevent them from breaking the regime.[29] The distribution of revenues might follow any of several different patterns, meeting only the criterion of acceptability. One pattern that has a good deal of appeal is the devotion of the funds for the purpose of overcoming malnutrition.

Aside from the questions about the establishment of an international agency, this regime raises questions about the determination of tax rates and their effect on production. Fees, such as license fees, to be paid prior to exploitation would be likely to deter initial efforts. Fixed taxes per area or per unit of output would not differentiate between high and low valued sites, unjustifiably rewarding one and penalizing the other. A tax on net income might avoid these difficulties, but there still remains the question of determining an appropriate rate. Negotiation of this rate would be fraught with difficulties and would provide no assurance that the entrepreneur would receive a fair return on his investment, or conversely, that the public share would be appropriate. As in the allocation of exclusive rights, it would be desirable to avoid, insofar as possible, arbitrary decisions.

D. *An International Authority.*—The fourth alternative regime is an extension of the above; the chief difference being that it would establish a market for the exclusive rights to exploit the minerals of the deep sea. This regime would be analogous to that which governs the exploitation of the oil resources of the U.S. continental shelf.

To achieve such a regime, the authority would have to acquire jurisdiction over the disposal of exclusive rights to the minerals resources of the deep sea floor. This jurisdiction must include the ability of the authority to extract rents, or royalties, through some form of market. It is suggested that the authority should *not* have the function of distributing the revenues received from the market.

There is no necessity for the authority to operate under the aegis of the United Nations. Obviously, the United Nations does not have, at present, an agency that would be equipped to deal with such an authority, nor does it have the expertise that would be required for management. These problems do not, however, preclude the establishment of such an authority within the UN structure. If it is so established, it would be clearly desirable for the authority to have a high degree of autonomy (similar, perhaps, to that of the World Bank), so that it might operate without pressure from the General Assembly.

The authority might be directed by a board with majority representation from the exploiting nations. These nations would be best equipped to provide the expertise that is required and it would be in their self interest to provide rules that would permit efficient exploitation. The revenues received by the operation (above the costs of administration) should be turned over to another agency for distribution. The revenues might be distributed in any of several ways. At one extreme, they might be used for the general support of the UN (although this is not likely to be acceptable in view of the possible use for peace keeping forces). At another extreme, they might be returned to the exploiting nations (although this would defeat the purposes of the market). A more likely possibility is that the revenues would be earmarked for some widely accepted goal, such as the overcoming of malnutrition. But in any case, the function of management should be separated from the function of revenue distribution.

In its operation, the authority would follow the general principles that the U.S. Department of the Interior follows on the continental shelf. Markets would be held at certain intervals of time for certain areas of the sea floor (that might have been nominated by the entrepreneurs). Rights would be awarded on the basis of high bid. And the bid might be expressed as a certain percent of net income.[30] Certain rules might be invoked to ensure efficient operation, to ensure performance, and to prevent the abuse of the rights. But there would be no basis, outside of these rules, for vetoing an award to the high bidder.

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[29] To those (myself included) who hold the *res communes* theory, it might also be considered as a justifiable payment to the "owners" of the resources. Or, to go a step further, it might be considered ethical and humanitarian for all peoples, but particularly those of the disadvantaged countries, to share in the wealth of the seas.

[30] Bids might be expressed in other ways as well—a bonus payment (such as that used on the U.S. continental shelf), as percent of gross income, as a payment per unit of output, etc. For an excellent discussion of these and other economic institutions that might be acceptable, see Brooks, "Deep Sea Manganese Nodules," *op. cit.*

The above suggestions for the operation of an international authority do no more than characterize its nature. Clearly, there are many difficulties that would have to be overcome and many interesting questions of law that would have to be answered. However, some form of market mechanism would appear to meet the economic criteria better than any of the alternative regimes.

The guarantee of exclusive rights would depend, of course, upon the degree to which the nations find this regime acceptable. There would be difficulties in deciding which blocks or areas to open for auction, but to the extent that some control could be exercised, this system would reduce the incentive to exploit at an excessively rapid rate. The auction should not deter the pioneers, since no one, at this stage of the game, is likely to bid very much for such a high risk venture. As experience is gained the amount of the bid is likely to increase, but it would still reflect the value to the entrepreneur of the exclusive right. It would be high for the high valued sites and low for the low valued sites. The allocation of rights through such a market place would benefit efficient producers and would solve the problem of deciding among competing claimants.

The acceptability of such a regime would depend upon how the exploiting nations would view their ability to compete in the market and upon how the non-exploiting nations would view their returns. With respect to the latter, the flag nation regime would provide them nothing. A registry office would provide nothing unless there is a provision for sharing revenues. Whether they do better by negotiating shares than by auction would depend upon their ability to negotiate. If they negotiate too well, then the registry office scheme would not be acceptable to the exploiting nations.

Admittedly, some of the advantages of the market mechanism have been painted in terms too glowing to be real. Obviously there will be imperfections. And obviously, too, nothing has been said about the great difficulties that would be experienced in establishing the laws and institutions that would govern such an authority. And yet, the principles are valid and should not be discarded simply because we do not know how to write the laws.

Several points might be kept in mind in the examination of this and of the other alternatives. (1) It is useful to distinguish between the pioneer effort, the short run situation, and the long run situation. Certain rules that might be desirable to stimulate the pioneer may not be desirable as exploitation develops. (2) My assumption that the resource sites will have economic scarcity in the short run is important to the criterion of non-arbitrary allocation of exclusive rights. If this assumption is incorrect, disputes over access to resource sites may not occur for many years. This may give us time to arrive at a system for the rational allocation of rights. I do not believe that this is the case, but the point should be fully explored. (3) My purpose in suggesting an international authority is *not* to provide an independent income for the UN but to meet the need for efficient development and exploitation of deep sea minerals. (4) The presence of the UN is not relevant to the discussion of alternative regimes. Even if the UN did not exist, some regime would be required to govern exploitation. (5) It may be advisable to adopt general principles now, while adoption is possible, even if this requires "great decisions".

STATEMENT OF THE AMERICAN TRIAL LAWYERS ASSOCIATION, NOVEMBER 29, 1967

My name is Paul Edelman and I am a member of the Committee on Ocean Resources of the American Trial Lawyers Association. I am testifying on behalf of the American Trial Lawyers Association's President Samuel Langerman.

The American Trial Lawyers Association, a 25,000 member bar association, represents the interests of accident victims and their families. Our organization has long been a champion of safety measures and our active maritime practitioners have taken part in discussions concerning cruise ship legislation and maritime liability laws.

At this time when the Senate has before it committee hearings concerning the rationale of exploitation of the seas, we believe that our members, and particularly the maritime attorneys who are members can offer a varied experience in aid of these far-reaching discussions.

Our organization has participated in a government grant from the National Council on Marine Resources and Engineering Development in a study on the legal liability problems in exploration and exploitation of the seas.

At present international conventions regulate the activities and legal regimes of the coastal shelves of this and other countries. The seaward boundaries are rather inexact in delimiting the powers of the adjacent nations. But technology has not advanced to the point of crucial international confrontations. On the other hand, our scientific vessels, submersibles and aquanauts are even now roving the seas.

However, the history of oil exploration on our own continental shelf shows that the dreams of twenty years ago are becoming a reality. We must prepare for the future of the high seas with this history in mind.

Various regimes for the exploitation and exploration of the riches of the sea and of the sea floor have been proposed. Much more study must be given to the problems involved before a national policy can be formulated. Technology, conservation and international rivalries, military, economic and scientific, are only the most obvious of the sources of conflict.

The American Trial Lawyers Association stands ready at this time to cooperate with Government in this endeavor and to offer the knowledge and training of its many maritime lawyers, and lawyers with international legal experience to the study of these problems. We the American Trial Lawyers Association have already made a contribution toward developing a national awareness and national policy, and will continue to do so.

We know that continued study of the practical as well as the legal and other problems will achieve a policy which will be consistent with a goal of peace and cooperation with other countries. The sea can be a place where wealth can be extracted for the good of al mankind and the enrichment of the world's population. At the same time the uncontrolled competition for the advantage of any one nation at the expense of others may lead to a breakdown of law and of international cooperation resulting only in the further embitterment of the nations, and dangerous confrontations of power.

We have made a beginning for international agreements concerning outer space and Antarctica. We must provide a rule of law which will apply fairly and realistically to the ocean depths.

WASHINGTON, D.C., *November 28, 1967.*

Hon. CLAIBORNE PELL,
Committee on Foreign Relations,
U.S. Senate, Washington, D.C.

DEAR SENATOR PELL: It is a privilege to offer written testimony on your Senate Resolutions 172 and 186 on which hearings are scheduled tomorrow before the Senate Foreign Relations Committee.

SENATE RESOLUTION 172

In conformance with agreements reached with respect to the living and mineral resources suspended in the waters of the high seas, it is appropriate that the United States request the United Nations to consider (1) the problems of conservation and use of marine resources of the sea bed and subsoil beyond the limits of the currently defined Continental Shelf, (2) the issues bearing on international agreement with regard to ownership, sovereignty, or the free use by all nations of these resources, (3) proposals for the arms control and safeguard provisions of weapons implanted on or beneath the deep sea floor, and (4) the establishment of fixed limits for defining the outer boundaries of the Continental Shelf of each nation.

In order more clearly to define the interests and the position of the United States in these areas, it is suggested that the President institute a detailed study of these issues within the interested departments and agencies of the United States. Such a study, together with the considerations of the United Nations, should more clearly define many of the problems of management and control of the resources of the sea bed floor and subsoil; through this process of clarification, solutions in the form of international agreements will certainly emerge.

Such a resolution should follow and be conformal with the results of studies by the United States and considerations by the United Nations of the subjects suggested for investigation in Senate Resolution 172.

Sincerely,

JAMES H. WAKELIN, Jr.

UNITED STATES SENATE,
COMMITTEE ON PUBLIC WORKS,
Washington, D.C., December 1, 1967.

Hon. J. W. FULBRIGHT,
Chairman, Committee on Foreign Relations,
U.S. Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: Governor Ronald Reagan, of California, has prepared a brief statement in connection with your committee's hearings on resolutions pertaining to jurisdiction over the ocean floor and it is his wish that your committee consider the statement and have it made a part of the record of the hearings. Therefore, I herewith submit Governor Reagan's views for the attention of your committee and respectfully request that they be included in the transcript of the hearings in question.

"Reference pending Congressional Resolutions opposing United Nations acquiring jurisdiction over ocean resources. Please record my support of these resolutions. Too little is now known of the ocean potential. Therefore, action permitting or approving U.N. jurisdiction is at this time premature. California is rapidly progressing its master plan for the conservation and orderly development of ocean resources with our national posture having the highest priority."—Governor Ronald Reagan.

Sincerely,

GEORGE MURPHY.

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington, D.C., December 4, 1967.

Hon. J. W. FULBRIGHT,
Chairman, Committee on Foreign Relations,
U.S. Senate,
Washington, D.C.

DEAR SENATOR FULBRIGHT: On November 29, your Committee held hearings on S.J. Res. 111 and S. Res. 172 and 186, dealing with jurisdiction over the ocean floor. Two of these resolutions have been introduced to focus attention on the United Nations' Malta Resolution which would give the United Nations jurisdiction and control over marine resources. The National Chamber applauds the attention given this issue by your committee.

In a September 14 letter to Secretary of State Dean Rusk, Allan Shivers, President, Chamber of Commerce of the United States, expressed the Chamber's concern over this issue and urged that the United States delegation oppose the Malta Resolution. The arguments presented by President Shivers in his letter clearly indicate that restraint is needed on any action that would confer title to some of this nation's resources upon an international body.

In accordance with this position, this National Chamber supports S.J. Res. 111 and opposes S. Res. 186. I would ask that this letter and the enclosed copy of the letter from President Shivers be included in the Record.

Sincerely,

DON A. GOODALL,
Legislative Action General Manager.

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington, D. C., September 14, 1967.

HON. DEAN RUSK,
Secretary of State, Department of State,
Washington, D.C.

MY DEAR MR. SECRETARY: The Geneva World Peace Through Law Conference, on July 13, 1967, recommended that the United Nations proclaim that the non-fishery resources of the high seas, outside the territorial waters of any State, and the bed of the sea beyond the continental shelf, be subject to the jurisdiction and control of the United Nations. Recent reports indicate that the United States Department of State is encouraging General Assembly consideration of this resolution in late September. We are told that the United States delegation will support the resolution.

The National Chamber strongly urges the United States delegation to oppose this resolution because it is ill-timed.

At the present time no practical purpose would be served by the United Nations resolution. This is not the time for considering United Nations takeover of marine resources. We are at least five, possibly ten, years away from attaining the knowledge and technology essential to develop and begin to harness the resources of the sea. We cannot now predict the international situation that will exist at the time this knowledge is gained. Until the whole issue is analyzed intensively on a national basis, it would be premature to confer title upon the United Nations or any other group.

Proponents of the resolution argue that giving the United Nations the "jurisdiction and control" over marine resources would avert a possible major international issue—submarine colonialism—and that management of marine resources would supply the United Nations with an independent source of income.

I doubt that these arguments will ever be valid, and certainly there is nothing to substantiate them at the present time.

The submarine colonialism issue has been minimized by recent actions which express the desire of individual nations to settle, among themselves, differences regarding the high seas. Examples of this attitude include the North Sea Agreement, the Bering Strait Agreement, and the numerous international fishing agreements.

Further, since the development and exploitation of marine resources is years away, so is the use of these as a source of income for the United Nations.

The Geneva Convention on the Continental Shelf (1958), to which the United States is a party, clearly establishes that the rights to marine resources rest with individual nations. This Convention, in Article I, defines the "continental shelf." If there is reason to change this definition, as the proposed United Nations' resolution would do, it would seem that the way to make the change is to amend the Convention rather than to go outside the signatories and make the change through the General Assembly of the United Nations.

In effect, by changing the 1958 Convention's definition of the "continental shelf," the United Nations' proposal could make the entire Convention void. This is because the Convention does not include a protective clause that permits the changing of any article without voiding all the other parts of the Convention. Therefore, the United Nations' resolution is indeed a serious step that could completely abrogate an important international convention regarding the seas.

Still another reason to oppose the United Nations' proposal at this time is the Marine Resources Council and Commission. This group has been instructed to prepare a report which will include United States policy with respect to marine resources. The Commission has been assigned the task of formulating national policy on this important subject. Certainly, the United States should want to obtain and evaluate the report of this Commission before supporting any United Nations' resolution.

There is little to be gained by action now, and much to loose—the resources of the ocean. The National Chamber urges restraint on any action that would confer title to some of this nation's resources upon an international body. Such action should be deferred until sufficient knowledge exists upon which to base a decision, and until the need for such a decision is evident.

Sincerely,

ALLAN SHIVERS, *President.*

UNDERWATER MARINE SERVICE.
Cleveland, Ohio, December 4, 1967.

Hon. CLAIBORNE PELL,
U.S. Senate,
Washington, D.C.

DEAR SENATOR PELL: Thank you for your letter of the 22nd of November concerning the Malta proposal in the United Nations.

Senate resolution no. 172 and 186 are the first constructive attempts to resolve the many problems of exploration and exploitation of the deep sea that I have seen.

Due to the internal friction and lack of cooperation by member nations, I do not feel that the United Nations is the proper agency at this time, to control over 70% of the earths surface. Perhaps the issue could be brought before the General Assembly with hopes of establishing a separate organization to administer the deep sea resources.

Concerning page 12, paragraph 8 of S. Res. 186, I believe that industry would feel that their proprietary devices and methods would be in danger from constant inspection by the sea guard. Perhaps an annual or semi-annual inspection would be more in order unless there were complaints against the company.

One possible area of conflict is in the area of mineral rights and leasing. These should be spelled out to avoid as many loop holes as possible.

With the exception of the minor problem areas I have mentioned, your resolutions are excellent, especially in the area of atomic weapons.

Best of luck in getting the resolutions out of committee and into law.

Sincerely,

WILBUR A. DICUS, *President.*

THE GEORGE WASHINGTON UNIVERSITY,
THE NATIONAL LAW CENTER.
Washington, D.C., December 5, 1967.

Hon. CLAIBORNE PELL,
U.S. Senate,
Washington, D.C.

DEAR SENATOR PELL: In response to your kind invitation of November 28, 1967, I am pleased to submit the following comments with regard to Senate Resolution 172 and Senate Resolution 186. Because the latter contains the greater detail, I shall address myself specifically to it.

I would like to preface my remarks by explaining that while I am at present the chairman of the Law Committee of the Marine Technology Society, the opinions expressed herein are solely mine, and not necessarily those of the Society.

Secondly, I would like to place my opinions in the proper context by emphasizing, as you have recognized, that the only true path to an effective world order—to the solution of the problems of nations—is via the route of international accord achieved by multilateral negotiation leading to formal or informal agreement. Having said that, however, I must go on to emphasize that problems can be solved only where problems exist. Meaningful progress takes place in the light of specific disputes. The term "dispute", as it is used here, I define as the existence of a group of operative facts so structured as to permit adversary parties to advance theories that become legal sanctions throughout the adjudicative process. On the basis of that definition, effective legal sanctions depend upon such a group of operative facts. This is as true in the international realm as it is with disagreements among individuals. If the facts do not bring a disagreement to the dispute level, resultant action based upon them can be at best speculative.

Let me give an illustration of "diplomatic restraint" preventing premature action. In 1944, a private correspondent informed the Secretary of State that he had developed means for rendering the ocean floor accessible to human exploitation, and expressed the view that this development, affording to the writer occupancy of lands previously beyond the reach of man, vested in him title and dominion over such lands. The Department of State, happily, did not concur. Not to be easily put aside, this same citizen, a year later, declared that for the purpose of perpetuating his claims, he established an "Under Seas Proprietorship" providing order where no national government could be permitted to function. He asserted that "extraterritorial lands are not at the disposal of parties other than members of the Under Seas Proprietorship" and that the "Under Seas

Proprietorship is a self governing world entity", with a flag to be flown over all sites in the murky domain.

It is apparent that this claim was not taken seriously. But it is important to realize that it was not disclaimed because it was in its nature, an undesirable concept. It was not honored because it so lacked in substance as to pose no recognizable threat to international order. In short, no person at that time believed that a potential for dominion existed in this individual.

Today the technology has advanced to a point where serious consideration of the future ocean regimes must be instituted. But the factual context has brought us little further than we were in 1944, particularly when we focus, as we have here, primarily on the deep ocean bottoms. We must now say, as we did in 1944, that there is not a sufficiently pressing problem to call for sweeping reform. There are pressures of urgency, to be sure, but the fact remains that there are but yet a handful of firms around the world with a capability for exploiting, commercially, hard minerals from the continental shelves, and these operators function in waters much shallower than those now being considered. The leading coastal nations of the world have not, contrary to some suggestions, yet entered into anything like a race for resources, assiduously avoiding serious encroachments onto areas fringing the recognizable geologic shelf. This in itself suggests a propensity toward reasonable consideration and negotiation as a basis for solutions of problems as the facts become clearer.

I must agree that the prospects of future use call us all to a serious academic discussion and prolonged consideration of the eventual wealth that we hope the oceans may yield. I believe that an informed community cannot long ignore the merits of proposals regarding shared wealths either in the home environment or in the world community. Such theories have great economic and social appeal. However, it would seem that their application at this point would be highly premature. Such action would run the risk of being quickly outdated and harmful when applied to unanticipated fact situations.

To be more specific concerning the proposals now before the committee, I would first like to say that I see serious problems of administration. There are many kinds of difficulties. The first, it would seem, is the apparent inability of any known supra-national organization to provide an effective administrative unit having the necessary expertise to supervise the potentially complex problems of ocean bottom leasing. Secondly, it would not seem practical at this time to structure a police force with the size and experience necessary for the conduct of inspection and enforcement procedures in the more than 139 million square miles of the world's wet spaces. Aside from these practical considerations, it would appear that the cost of maintaining such an extensive system would for many years exceed the potential net economic yield.

Article IV of Senate Resolution 186 puts voice to one of the most frequently heard arguments for immediate action; the fear that the oceans might be used for hostile or aggressive purposes. To this end, the proposal contemplates certain restrictions on the use of the ocean bottoms for emplacement of objects containing weapons of mass destruction. I believe that this particular proposal is at present unnecessary. First, as stated above, there is a real problem of inspection and enforcement. I do not believe that we are entitled to rely on agreement alone lacking sufficient ability to create an infallible detection system. Secondly, recent experiences in new weaponry suggests that there is merit in an arms control system that succeeds through neutralization by balance of power.

The analogies made to space and Antarctic regions seem appealing. Yet I do not find them apt. Such comparisons are bottomed on the premise that the ocean spaces, like those areas, are no-man's lands, where contemporary civilization has yet to penetrate. Were this true of the oceans, the arguments based upon those agreements would have more force. Contrary to the celestial bodies or southern extremes of the earth, however, the oceans have been in commercial use for thousands of years. This makes two things true of them not true of the others: (1) there is great potential for wealth, the extent of which we must determine within reasonable bounds before we enter treaties directed at its exploitation; and (2) there are existing accommodations of uses that have been worked out peaceably over the intervening years. There has evolved a great body of law based upon proven custom and usage. As Professor Myers McDougal, of Yale Law School, appropriately observed, it is error to commence our considerations under the impression that world order does not exist with respect to the oceans. Therefore we are not totally devoid of sanctions adequate to deal with the problems with which we may be faced until we have all of the facts.

In summary, I believe that the principles of sharing of wealth for the beneficial use of all the participants are of irrefutable value. I believe just as strongly, however, that premature evaluation of these principles for the sake of quick resolution of yet unknown problems would not be of much use. The Special Working Group stimulated by the November 8th proposals of Ambassador Goldberg before the United Nations holds promise. The President's Commission, while under a mandate concerning national problems will most certainly produce data of aid in solving this complex problem as well. In view of these negotiations, it would seem that we should try to avoid such premature determinations as the admittedly shortsighted limitation placed upon the extent of the legal continental shelf in the Geneva Convention of 1958.

I am convinced that the mere introduction of such resolutions as those in question is of inestimable value. Senator Pell, and this Committee, are to be highly commended for their foresightedness and dedication. But on the whole my attitude must remain, for the time, one of restrained optimism and patience. When the information from present studies becomes available, discussions stimulated by this, and similar inquiries, will have established a framework within which prompt and appropriate action may be taken. Until that time, it would be unwise to indorse specific action that may mislead nations as to our purpose, or discourage present plans for industrial expansion into the fields of ocean space. Thank you for the opportunity to express these views.

Sincerely yours,

THOMAS A. CLINGAN, JR.,
Associate Professor of Law.

HARVARD UNIVERSITY,
CENTER FOR POPULATION STUDIES,
Cambridge, Mass., December 11, 1967.

Senator J. W. FULBRIGHT,
Chairman, Committee on Foreign Relations, U.S. Senate,
Washington, D.C.

DEAR SENATOR FULBRIGHT: I have been asked by Senator Claiborne Pell to submit written testimony concerning S. Res. 172 and S. Res. 186, on which hearings were held before your Committee on Wednesday, November 29, 1967.

Senate Resolution 172 proposes that the United States Senate affirm certain general principles concerning the exploration and use of the deep sea by the nations of the world. These principles seem reasonable and good to me, and I can see no reason why they should not be accepted as a basis for United States policy. Some of their implications are spelled out in S. Res. 186, and I shall confine the remainder of these comments to that Resolution.

The proposed "Declaration of Legal Principles Governing Activities of States in the Exploration and Exploitation of Ocean Space" is liberal and far-sighted, and would serve the best interests of the United States. Senator Pell is to be congratulated for the thought and sophistication that have clearly gone into the preparation of this Declaration. There are certain specific points which I believe should be clarified or modified as follows:

Article II, Section 1 (page 6, line 7). I suggest the words "submarine transportation and communication" be inserted after the words "in-solution mining."

Article II, Section 4(a) (page 8, lines 7–19). Perhaps there should be some spelling out of the purposes to which the fees or royalties provided in this Section should be put. I have long believed, and have publicly stated on many occasions, that the resources of the deep sea floor might be used to give the United Nations and/or some of its specialized agencies an independent source of revenue, which would give them some degree of autonomy from their member governments.

Article II, Section 4(e) (page 9, lines 17–23). There should be no interference for any reason with "fundamental oceanographic or other scientific research carried out with the intention of open publication." It is not enough to say that such interference shall not result from the exploration of the sea bed and subsoil of ocean space and the exploitation of its natural resources.

Article IV, Section 1 (page 13, lines 11 and 12). The stationing of devices for submarine detection, identification, and tracking on the sea bed and subsoil should be permitted. Such devices, while in no sense offensive weapons, may be essential for national and international security. As such, they could be thought of as having a "peaceful purpose," but the position might be ambiguous if they are not specifically mentioned. I can see no compelling reason why such devices

should not be subject to inspection, in accordance with Section 5 of Article IV (page 13, line 25 through page 14, line 10).

Article IV, Section 2 (page 13, lines 13–18). Would these prohibitions apply to our Polaris submarines? If so, words should be added excluding submarines from the provisions of this Section.

Article V, Section 1 (page 14, lines 13 and 14). Radioactive waste disposal in the deep sea should not be prohibited, but should be subject to appropriate safety regulations which could be established by the International Atomic Energy Agency.

Article VI (page 14, lines 22–25 and page 15, lines 1–6). Many States on the coasts of South America and Africa possess a very narrow continental shelf, even under the definition proposed in this Article. In some cases, a depth of 600 meters is attained within 12 miles of shore, that is, within the limit of the territorial sea. I suggest that the area of the continental shelf be defined as within either a specified distance from shore, or the 600 meter contour, whichever is greater. Such a provision should draw support in the U.N. General Assembly from States with narrow continental shelves, as usually defined, and would not harm the interests of States that have broad shallow continental shelves.

I hope you will not consider that any of the above suggestions constitute a fundamental objection to the policies or institutional and legal framework proposed by Senator Pell. If his "Declaration" were adopted by the General Assembly, and accepted by the United States and other leading members of the United Nations, we would have taken a giant stride toward world law and order.

Very respectfully yours,

ROGER REVELLE, *Director.*

THE NATIONAL OCEANOGRAPHY ASSOCIATION,
OFFICE OF THE PRESIDENT,
Washington, D.C., December 13, 1967.

Hon. J. W. FULBRIGHT,
Chairman, Senate Foreign Relations Committee,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This letter is in response to the request of Senator Claiborne Pell for remarks by the National Oceanography Association on resolutions Nos. SR–172 and SR–186.

The National Oceanography Association is a broad-based organization having members from industry, the academic and scientific community and the general public—all with a deep interest in oceanography. NOA's purpose is to promote the common interest of the field of oceanography by means of creating better public understanding of ocean use and its relations to the economy, creating nationwide interest in scientific research and educational facilities in the field of oceanography and promoting the development and utilization of the tremendous resources of the ocean for the benefit of mankind in general and the United States in particular.

NOA has been actively concerned about the proposal that title to the deep ocean bed and subsoil be vested in the United Nations. Evidence of the concern is witnessed by the strong support NOA has given to the several resolutions introduced in both the House of Representatives and the Senate. These resolutions, including Senator Norris Cotton's SJR–111, consider an approach to the internationalization of the deep ocean bed and subsoil and its mineral resources at this time as being premature. NOA feels that this attitude is desirable for the following reasons:

1. The National Council on Marine Resources and Engineering Development and the Commission on Marine Science, Engineering and Resources are developing, at the request of Congress, proposals for the establishment of United States goals for ocean development. Such goals do not now exist. NOA believes that these goals must be adopted, before action can be taken to provide for the administration of deep ocean activities. This does not presume that the policies established on the recommendations of the Council, the Commission, or the Congress itself would ignore the need for the establishment of international agreements in the interest of world health, well-being, peace and security. It does assume the use of judicious procedures for the determination of specific agreements.

2. The U.N. in particular has not displayed the ability nor was it chartered to manage the world's resources. NOA believes that it would be ill-advised and premature to entrust the U.N. with the control of the deep ocean.

In light of the foregoing, the National Oceanography Association believes that the proposals set forth in SR–172 and SR–186 are premature. All of the actions required of the government are being undertaken under PL–89–454.

Sincerely yours,

JOHN H. CLOTWORTHY, *President.*

TESTIMONY ON S. RES. 186 BY WILLIAM T. BURKE, PROFESSOR OF LAW, OHIO STATE UNIVERSITY

The following brief comments are directed both at some of the provisions embodied in S. Res. 186 and, more broadly, at the general problem of establishing a structure of international authority by which rational and orderly development of deep ocean mineral resources may be undertaken in the interest of the United States and of states generally.

It is apparent that some of the detailed provisions of the ocean treaty proposed in S. Res. 186 derive from two other agreements which deal with areas beyond the boundaries of any state, the Outer Space Treaty and the Antarctic Agreement. Although past experience undoubtedly may serve as a wise guide in seeking to resolve anticipated problems arising in the ocean, there are rather obvious differences among these environments that suggest caution in extrapolation from one to the other. With very limited exceptions neither space nor the Antarctic offer, now or in the foreseeable future, the resource potential that seems available in the ocean even over the short-term. And certainly neither of these areas has in the past, in the direct contrast to the ocean, provided man with a great range of resources. The record of man's involvement in production of values from the ocean is very long indeed. The result is that public and private interests are already deeply engaged in the oceans in ways not at all comparable with either space or the Antarctic. Adequate consideration of our common interests in ocean development cannot, therefore, rest upon unexplored assumptions about the relevance of the quite different situations pertaining in space and the Antarctic.

S. Res. 186 suggests the general outlines of an international structure for regulating ocean exploitation. With the general objective sought by this approach I have no quarrel. A number of years ago Professor McDougal and I wrote that it seemed "inevitable" that some form of international organization would be developed to resolve the problems of mineral exploitation beyond whatever limit came to be accepted as the continental shelf and nothing has happened in the years since then to alter that conclusion so far as I am concerned. However, it is one thing to agree on this goal and quite another to arrive at the substantive arrangements to implement it. In this sense the general outline in S. Res. 186 is quite clearly unsatisfactory, for it fails to deal with two of the most critical problems that must be overcome if an acceptable international system is to be established. These problems are: the criteria for decision about allocation of licenses for exploitation of resources and the distribution of benefits realized from the fees or royalty payable from the licensee. To the extent the suggested treaty does address the problem of criteria for decision, it appears to me to be subject to serious question. For example, the "special interest" of the coastal state "in conservation of the natural resources of the seabed and subsoil of ocean space adjacent to its territorial sea and continental shelf" is by no means self-evident and appears more as a device for selfish extension of coastal rights, than as an effort to establish a regime for exploitation that is in the common interest. Perhaps of even greater importance, there is no discernible reason whatsoever for requiring, apparently as a condition of research beyond the continental shelf, that the coastal state is "entitled" to take part therein. This latter provision, and the implications of others, could pose serious new problems to the free conduct of scientific research, an activity that is already sufficiently threatened by states in pursuit of short-sighted interests.

Part IV of the proposed draft ("Use of Seabed and Subsoil of Ocean Space for Peaceful Purposes Only") suggests still other questions, the principal one being whether it is desirable to single out this specific part of the earth as open only to use "for peaceful purposes", with the latter concept left wholly undefined.

Part V on disposal of radioactive wastes goes well beyond the obligation which the United States and other contracting states have accepted in the Convention on the High Seas. Whether there is reason for this additional measure of obligation seems to me subject to considerable doubt. It may, for example, be asked whether implementation of the absolute prohibition of disposal embodied herein

is compatible with continued effective operation of nuclear vessels, particularly submarines.

The above comments are intended merely to be illustrative of the problems raised in this proposal for submitting a proposed draft treaty to the General Assembly of the United Nations. There are also, of course, serious questions about whether it is wise to recommend this specific method for pursuing a resolution of the legal and other problems that may attend ocean development. It is certainly conceivable that other procedures and techniques are more likely to serve the objectives sought.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE,
New York, N.Y., December 13, 1967.

HON. CLAIBORNE PELL,
Committee on Foreign Relations,
U.S. Senate, Washington, D.C.

DEAR SENATOR PELL: You invited me to send you my comments for the Record on Senate Resolution 172 introduced by you on September 29, 1967, and Senate Resolution 186 of November 17, 1967, also introduced by you. These resolutions deal with a matter of great urgency, the management and control of ocean space. You indicated that the Record would be open for comment on them until December 15.

You are to be congratulated for introducing these two resolutions in the United States Senate. Both deserve Senate approval because their passage will serve the interests of the United States and other nations by promoting the development of international law and international organization. In joining the United Nations, all Member Governments undertake to promote certain objectives including the maintenance of international peace and security, the solution of economic and social problems and the harmonizing of national action for common ends. I thoroughly agree with you that these objectives will be threatened until a legal regime is developed for the control and management of ocean space which comprises more than seventy per cent of the earth's surface and contains important resources beneficial to man.

Senate Resolution 172 deserves support as it stands so far as I can judge from my experience with, and study of, foreign policy and international law and organization. Whether the year 1969 will be the best year in which to hold an international conference remains to be seen, but conference and agreement in the near future there must be on the definition of limits of the Continental Shelf of each nation.

Although Senate Resolution 186 also deserves support, I would suggest one change. Since we do not yet know enough about the problems and potential of ocean space, including the sea bed and its subsoil beyond national jurisdiction, to define all the legal principles that will be necessary to safeguard international peace and security, I urge that your resolution be amended to strike out "declaration" on page 2, line 3, in favor of "examination" so that its title would read: "Examination of Legal Principles Governing Activities of States in the Exploration and Exploitation of Ocean Space."

To be consistent with this change the words "be guided by" on lines 7 and 8 of page 4 might be deleted in favor of "examine the utility of . . ."

On page 17, I suggest changing lines 5–11 to read:

"Recommends that a Committee of the United Nations relating to the law and management of ocean space be established to examine the principle to be included in a draft international agreement:

"Requests the Committee relating to the law and management of ocean space to report to the twenty-third session of the General Assembly on the progress of its work."

With these changes Senate Resolution 186 would add force to a proposed U.N. resolution that will doubtless be passed by the 22nd General Assembly this month, perhaps this very week, establishing an *ad hoc* committee to study the scope and various aspects of the question of the reservation exclusively for peaceful purposes of the sea bed and ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind. This resolution, if passed, will also request the U.N. Secretary General to report on the work of U.N. agencies in ocean affairs.

The passage of this General Assembly Resolution, prepared by a committee of many governments including the United States, will provide an opportunity to define national interests very carefully so as to achieve acceptable agreement on the international principles, to be implemented by a treaty regime for the management of ocean space. Since you have already indicated in your statement before the Senate Foreign Relations Committee your intention to introduce at a later date a draft treaty for ocean space, you will have an opportunity at that time to urge specific principles and treaty provisions.

My suggested change in favor of examining rather than declaring principles at this stage will provide more time to investigate a difficult subject of prime importance for national and international security and human welfare. You may, for example, wish to consider the question of the U.N. Secretary General's role in implementing an international regime for the management of ocean resources and whether or not a new international body should be established to provide better management of ocean resources than may be possible with the present array of agencies. You may wish further time to examine the principles you suggest to govern the role of the U.N. Security Council, the rights of coastal states in ocean space adjacent to their territorial seas, and the responsibility of licensees to share knowledge and data, and, most particularly, the proposed "Sea Guard of the United Nations."

Please rest assured that even if my suggestions do not commend themselves to you, I nonetheless urge the adoption of Senate Resolutions 172 and 186. I shall, of course, forward you my study on the role of international organization in ocean management as soon as it is available.

Please note that I speak only for myself and not the Carnegie Endowment for International Peace where I am privileged to study as a Visiting Research Scholar on leave of absence from the University of Pittsburgh.

Sincerely yours,

DANIEL CHEEVER,
Professor of Political Science and International Affairs, Graduate School of Public and International Affairs, University of Pittsburgh.

DEPARTMENT OF TRANSPORTATION,
U.S. COAST GUARD,
Washington, D.C., December 18, 1967.

HON. CLAIBORNE PELL,
U.S. Senate,
Washington, D.C.

DEAR SENATOR PELL: This is in reply to your request for the views of the U.S. Coast Guard with regard to Senate Resolutions 172 and 186.

Although the resolutions contain matters of interest to the U.S. Coast Guard, they primarily affect the foreign policy of the United States and accordingly, it is desired to defer commentary on them to the Department of State. To this end, I am aware of and support the recent position of the Department of State as presented by the Assistant Secretary of State for International Organization Affairs before the Senate Foreign Relations Committee.

Regarding the establishment of the Sea Guard, the U.S. Coast Guard is the logical organization within the United States government to participate in the "Sea Guard." The U.S. Coast Guard presently performs for the United States many functions that are similar to those envisioned for the "Sea Guard," and with some augmentation of forces, the U.S. Coast Guard could be ready to assume new responsibilities in a minimum of time.

I thank you for this opportunity to comment on these resolutions.

Sincerely yours,

W. J. SMITH,
Admiral, U.S. Coast Guard, Commandant.

STATEMENT OF HUMBLE OIL & REFINING CO., BY T. D. BARROW, SENIOR VICE PRESIDENT ON SENATE RESOLUTION 172 AND SENATE RESOLUTION 186

Humble Oil & Refining Company appreciates the opportunity to offer this statement in regard to Senate Resolution 172 and Senate Resolution 186 which have been introduced by Senator Pell and are now pending before the Senate Committee on Foreign Relations.

Humble's interest in oceanography is primarily related to offshore petroleum exploration and production. In addition, we have extensive tanker operations and are interested in operations for mining other than oil and gas from the ocean floor. Research and development activities associated with all these functions are therefore of prime interest to our company.

Humble is convinced that the field of oceanography includes tremendous potential benefits for our nation and for the betterment of all mankind. Before these benefits can be economically realized, however, new understanding and new technologies must be developed. The federal and state governments, the academic community, and private industry all have important and often interrelated tasks to perform if we are to solve the multitude of legal, political, environmental, and technical problems that we now face in working on and in the oceans. Whereas a significant beginning has been achieved, our needs for the seas' resources may well outpace our ability to produce these resources economically. The term "economically" should be stressed. Reliance on private industry operating in the competitive marketplace will maximize the efficiency with which we can exploit the oceans' resources and hence provide society with these resources most economically.

There are decisions which must be made within the realm of the federal government to facilitate the development of the economic use of the sea. Of primary importance among these is the clarification and development of the applicable legal structure. Only if the legal parameters of operations on and below the seas' surface are known with acceptable assurance can the nation and the individual corporation rely upon the economic forces of the marketplace in making their investment decisions.

Whereas we recognize the need for ultimate clarification and development of legal principles governing activities of states and individual companies in the exploration and exploitation of ocean space, and hence eventually for Congressional consideration of legislation or resolutions similar to S. Res. 186, it is our judgment that this is not the proper time for such consideration. Several factors and conditions precedent need to be settled so that all factors may be considered in formulating an intelligent, meaningful oceanography policy.

It would seem that prior to the enactment or formulation of legal principles governing oceanography it would be important to develop a national policy or goal as to this subject. We feel the Congress should be complimented in moving forward to identify national objectives concerning underseas resources by the creation in 1966 of the National Council on Marine Resources and Engineering Development and the Commission on Marine Science, Engineering, and Resources. We consider that at the present time it would be premature to move forward with a definitive proposal such as envisioned by S. Res. 186 prior to receiving the report and recommendations of the Council and Commission, which should be forthcoming in the near future.

Equally important in our opinion is the fact that current knowledge is limited in many essential elements of oceanology. The quantity and quality of available resources and the physical means of gaining access to these resources must be resolved. The conditions for processing and marketing and the effect of the extractive activities upon other uses of the sea are important considerations. Industry requires increased knowledge of the atmospheric interface with the oceans' surface, the environmental conditions within the oceans' waters and the benthic interface before engineering and technological innovations can be developed to make possible man's utilization of the resources in and under the sea. Again, we believe that it is premature at this time for the nation to formulate a definite oceanographic policy until such time as our knowledge of the subject has greatly increased. It is our judgment that such a policy at this time would tend to hamper the research and development climate both within the federal structure and within industry.

We, therefore, conclude that consideration and final judgments as to the merits of the policies proposed by S. Res. 186 be held in abeyance until a more definite understanding of the ocean and its resources are available to us and until the Council report is filed and can be carefully studied. As we have previously stated, there is a great need for clarification and development of the applicable legal structures. In this light may we compliment the author of the subject resolutions, Senator Pell, on a well considered approach to this problem. It may well be that after additional knowledge has been gathered and national goals established

this may be the proper approach. In our opinion, however, this consideration or judgment cannot be made at this point in time with the information currently available.

We are of the opinion that as between the two resolutions S. Res. 172 is a more proper expression of purpose and direction at this time.

We would like to express our appreciation to the Committee for giving us this opportunity to present our views.

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